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THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE ADRENAL GLANDS*

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The number of clinical syndromes which are definitely attributable to disease of the adrenal glands, in the present state of our knowledge, is not very great. The results of recent physiological and biochemical studies, however, are beginning to offer a solution of many problems. As is well known, present knowledge indicates that the two parts of the adrenal—cortex and medulla—are in reality separate anatomical and functional structures. Ever since the discovery and appreciation of this fact, however, the suspicion has remained that the close proximity of these two apparently distinct structures must indicate in some way an in-

terdependence of function. Although both organs have a separate arterial supply, the blood from the cortex flows eventually into the capillary network of the medulla, and most of the blood ultimately is drained from the whole gland by the one venous system of the medulla. The possible significance of this anatomical arrangement is not yet clear.

It is now definitely established that the medulla is the site of formation of adrenalin, and that a clinical syndrome of hyperfunction of the adrenal medulla exists, due to flooding of the body with adrenalin. It is found in medullary tumors. Clinical hyperplasias of the medulla have not been observed. These adrenalin-producing tumors have been called chromaffin-cell tumors, and several other names have also been suggested. They are generally slow growing, encapsulated growths. Often it is possible to remove them successfully, with complete amelioration of the symptoms, and apparent

cure of the patients. Since this is true, the importance of recognizing the clinical signs of this condition, rare though it may be, is obvious. These growths are sharply distinct from adrenal cortical tumors, and a word of description may be in order. The presence of the tumors is characterized by attacks of paroxysmal hypertension, in which other evidence of sympathetic excitation are also exhibited. At irregular intervals, due to mental or emotional stimulation, physical exertion, abdominal pressure, or even stretching or bending into certain postures, the blood pressure will rise sharply, 100 to 150 points above its usual level. The duration of the occurrence of such periodic attacks varies between a few months and a number of years. The frequency of the attacks, as a rule, increases with the duration of the disorder. Intervals of years may elapse but usually they are found to come at the beginning once or twice weekly, and gradually to increase in frequency until they occur daily or several times daily. An

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attack lasting sixteen hours has been reported. In one case recently observed, death occurred, presumably from an attack induced by pressure, subsequent to drinking four glasses of water for a renal function test. The most frequent times of the attacks seem to be in the early morning hours, or upon arising, or in relation to meals. Prior to the onset of this disease, the general health is, as a rule, good. Extreme fatigue and prostration follow the attacks, and no effect on the alarming symptoms has been accomplished by a wide variety of drugs.

The attacks are accompanied by palpitation, vertigo, flushing, difficulty in breathing, profuse sweating, pulsations of the neck vessels, and tremors of the extremities and head. Vomiting is common, usually with nausea. Pulmonary edema frequently occurs. Severe pain usually is present, which may be precordial or epigastric. Usually the hypertension and the accompanying symptoms subside gradually, often over a period of several hours. In two-thirds of the cases which we have studied neither the tumor nor the proximal kidney was felt. In the others a palpable mass was made out, which has been mistaken for the spleen when present on the left side. X-ray and pyelogram studies have been disappointing in that they have never disclosed the presence of a medullary tumor which was not also demonstrable by palpation.

A great proportion of the cases with tumors of the medulla have been bilateral, and the others have been about equally divided as to the side affected. The possibility of inducing attacks of hypertension during operations complicates the picture. In case a normal adrenal is found at the first incision, the shock or pressure may precipitate a release of adrenalin from the other, affected side, and cause a severe attack. The fatal cases usually have pulmonary edema and cardiac enlargement, which are frequently found at autopsy. The tumors are usually described as beefy red and soft, the consistency being compared to that of the enlarged thyroid of Graves' disease. They vary from the size of a cherry or English walnut to that of an orange, kidney or grapefruit. The size seems to bear little relation to the number or intensity of the attacks. Large amounts of adrenalin have been recovered from these tumors and in one case of ours more than seven times the

normal concentration of adrenalin was found in the tumor tissue. It is to be remembered that the clinical history may sometimes be mistaken for neurotic or climacteric disturbances. A proper and early diagnosis is of great importance because of the possibility of surgical removal and cure.

At the present time there is no clinical syndrome which, in our opinion, with existing methods can definitely be associated during life with reduced function of the adrenalin medulla. We will, therefore, pass to a consideration of the conditions of over-function and of under-function of the adrenal cortex. Modern interest in this matter has been greatly heightened because of the discovery of an extract from the adrenal cortex which is effective in maintaining the lives of adrenalectomized animals. A very brief consideration of the function of the cortex is necessary in order to have a proper understanding of the clinical disorders.

The adrenal cortex is now believed to have an intimate relation to sexual development, to carbohydrate metabolism, to protein metabolism, and to the metabolism of mineral salts, sodium and potassium, and water. Very recently evidence has been advanced of its relationship to one of the vitamin B factors, riboflavin.

Studies during the past two years, particularly by Reichstein at Zurich, and by Kendall, and Wintersteiner and Pfiffner in this country, have shown rather clearly that the cortical hormone is a cholesterol-like substance belonging to the group of chemical compounds known as phenanthrenes, of which the sex hormones are also members. It will be recalled that the adrenal cortex is said to resemble the histological appearance of the corpus luteum, and the close chemical relationship of the cortical hormone to the sex hormones offers a suggestive explanation for the frequent occurrences of sexual abnormalities in patients suffering from cortical tumors, in which the metabolism or chemical formation of the cortical hormone may presumably be abnormal. The relationships of the adrenal cortex to carbohydrate and protein metabolism, on the other hand, at the present time are very poorly understood. Attacks of hypoglycemia do sometimes occur and may sometimes be responsible for death in the crises of Addison's disease. Similarly, the muscular weakness may be due to disturbed

carbohydrate metabolism. No less than five separate, although closely related compounds, have now been described by Reichstein, with varying degrees of cortical hormone activity. It is possible, however, that they may each have some special relation to one of these functions.

The effects of excessive or distorted activity seems to be fairly clear in the case of cortical adrenal tumors with their extraordinary symptomatology in the realm of sexual development. As a matter of fact, not only sexual development is perverted but these tumors often have a profound effect upon the general physical development, the structure of the bones, muscles, skin, and upon the mental processes. The general outlines of this syndrome have been better understood recently. The clinical picture has been termed "the adrenocortical syndrome," and while not always typical, has a number of characteristic features.

Cortical tumors are usually soft growths of yellowish color. They are at first well encapsulated but may later grow through and invade other tissues, with localized hemorrhages and areas of necrosis. If metastases occur, they are frequently to the liver and lungs. When the tumors appear in infancy and childhood, they may produce symptoms of precocious puberty, with abnormal hair development, voice changes, mental and physical changes, and obesity and hypertrophy of the sex glands. A child of 18 months recently seen by the writer had the external genitalia of a man with hairy development and obvious precocious mental changes. This case died at operation, at which time a cortical tumor was discovered. A patient reported by Fordyce is said to have carried a bucket of coal weighing 18 pounds across the room shortly after learning to walk, at the age of 20 months. In girls, before the age of puberty, cortical tumors are associated with many of the characters of the precociously adolescent male. Hirsutism and hypertrophy of the clitoris are marked features. It should, however, be borne in mind that this syndrome has also been observed in disorders of the gonads, thymus, and probably of the pineal and pituitary. The adrenal, however, is probably also involved in these cases.

Tumors in the adult lead to virilism and hirsutism, and many cases occur in women who have previously been quite normal.

They are associated with gradual inversion of the sexual characters, both psychic and physical, a change which is sometimes distressingly evident to the patient herself. Hair appears in the body regions where it normally occurs in the male. It is apt to be short, crisp and curly, and may be profuse over the face and thighs. It is also common on the legs and forearms. There is a loss of the feminine psychic reactions, and untidiness and coarseness of voice may occur. There is a loss of normal sex interest. Amenorrhea is the rule. We lay great stress on this fact. In our series, obesity is not a characteristic. In the adolescent the menses fail to appear. In older persons, the breasts flatten and the internal genitalia atrophy. The male characteristics do not appear simultaneously. The beard is often longest delayed. Symptoms sometimes develop very rapidly, but usually it is only after the lapse of several months that the change in the appearance of the patient is manifest. Walters, Wilder and Kepler have especially emphasized the appearance of this syndrome in conditions of adrenal cortical hyperplasia rather than of tumor.

An analogy appears to exist between the suprarenal cortical syndrome and that of hyperthyroidism as well as that of hyperparathyroidism. In each, apparent hyperfunction seems to follow the development either of tumors or of diffuse hyperplasia. Reduction of the mass of functioning tissue in either case, according to the Mayo workers, may be expected to induce return of normal conditions. On the other hand, just as the removal of thyroid or parathyroid tissue may induce myxedema or tetany, so removal of cortical tumors may at times result in acute cortical deficiency. The possibility of supplying the essential cortical hormone for longer or shorter periods, together with salt, until the balance can be reestablished, makes the outlook now decidedly more hopeful in the cases subjected to operation.

Surgical removal of cortical tumors has been followed in a number of well recognized instances by a marked amelioration of the symptoms. A case described by Gordon Holmes, for instance, showed resumption of menstruation after removal of the tumor, and gradual loss of the abnormal hair growth occurred after a few months. Unfortunately, follow-up reports are usually lacking of cases which have been observed

for long periods after removal of these tumors. It is hoped that they will be recorded. Two of my own cases, both in young women, showed a resumption of menstruation within three or four months after removal of the tumor. In neither case was there much change in the appearance of the beard. One has continued to shave regularly and has been unwilling to coöperate to the extent of allowing the facial hair to grow in order to permit a study of changes in the rate of its growth or character. The voice in this woman is now somewhat more feminine than when first observed, and with the reappearance of normal, regular menstruation, the mental attitude is much improved. To say a cure has taken place, however, in any of these patients, we believe, has not been established.

In the experience at Baltimore, bilateral cortical hyperplasia often has presented certain characteristic clinical features in females, which differ from the tumor picture just described. Young and Howard have called attention to the fact that a curious anatomical anomaly is observed at birth, in the cases of cortical hyperplasia observed in the Hopkins Clinic. The phallus or clitoris is enlarged, and the urethra opens just below this organ, as in hypospadias, but without an external vaginal orifice. When the cystoscope is introduced into the vaginourethral sinus, the cervix may be viewed directly. The adult male characters in such patients vary in development. Evidences of virilism may appear as early as the second year; others seem normal in every way except for the congenital anomaly until the age of normal puberty, when male secondary sex characters appear. When these patients reach adult life they are usually small in stature and thick boned. Young and Howard have observed this syndrome due to cortical hyperplasia in two members of the same family twice in their series of ten cases. It has been reported only in females. Operative reduction of the mass of enlarged adrenal cortical tissue has not as yet produced an amelioration of symptoms in any of these cases.

No female patient should be operated upon for the possibility of cortical tumor resection without preliminary examination of the ovaries for the possible presence of a tumor such as arrhenoblastoma. This ovarian tumor may produce a picture of virilism clinically indistinguishable from that of a

suprarenal tumor, although more apt to develop during the active period of sexual life. Precocious puberty has also been reported to be associated with lesions near the floor of the third ventricle. The subject has been recently reviewed by Ford and is relatively very rare. Cortical adenomata have also been described associated with Graves' disease.

The relation of the syndrome just described to other tumors of the endocrine glands is awakening great interest, but no definite conclusions as to the underlying mechanism can yet be drawn. Particularly noteworthy are the similarities to Cushing's syndrome, or pituitary basophilism, to pineal tumors, to certain ovarian growths and to the so-called oat-cell tumor of the thymus, with secondary lung metastases. The clinical features of Cushing's syndrome, if not identical, certainly have many points in common with the adrenocortical syndrome, and hypertrophy or adenoma of the adrenals is frequently reported in such cases. It is after puberty that the pituitary basophilic and the adrenocortical syndrome closely approximate each other.

Differential points between the two conditions include the fact that the adrenogenital syndrome after puberty is generally confined to women, while the basophilic syndrome, although present usually in women, also occurs in men. The one is characterized by virilism, the other rather by depression and inhibition of sex function. It must also be stressed that cases of simple or of malignant cortical neoplasm may occur without evidence of the characteristic genitosuprarenal syndrome.

Crooke has recently reported a characteristic hyaline change in the basophil cells of the pituitary which he considers not to be an expression of cellular degeneration but rather of altered physiologic activity. It was found in 12 cases with the basophilic adenoma syndrome, associated not only with basophilic tumor, but also with thymus neoplasms, and neoplasms and hyperplasia of the adrenal cortex. The importance of this observation, if confirmed, obviously rests on the unitary basis which it suggests for the etiology of all of these diverse conditions. Differences in the hirsutism and in the form of obesity of adrenal, ovarian, and pituitary growths have been reported but are seldom of real differential diagnostic value. The pituitary has been associated

with the "girdle" type of obesity, the adrenal with the "buffalo" type, and ovarian obesity is described as generalized. Very few cases of the adrenogenital syndrome are described in the adult male, and I regard its actual occurrence as somewhat uncertain.

Excretion of large quantities of female sex hormone has been reported with negative pregnancy tests in a number of patients exhibiting the genito-suprarenal syndrome. The excretion of follicular hormone has been reported to disappear or diminish promptly from the urine following operative removal of the tumor growth. There are no abnormalities noted in prolan excretion. The excretion of large amounts of male sex hormone is also reported. Marrian has recently described a new phenanthrene compound present in the urine of these patients.

The injections of air in the perirenal fascial planes (Gerote's fascia) has been found valuable in outlining the tumor and the gland on subsequent x-ray. Often, however, it is disappointing. In operative removal of cortical tumors it is highly desirable to secure bilateral exposure of the organs in order to determine clearly the diseased side, and to be sure that a normal appearing adrenal is present on the opposite side. Such an operative procedure has recently been described by Hugh Young. This is a highly important matter, since atrophied adrenal tissue may be found on the side opposite the tumor. Severe postoperative shock is relatively common. X-ray therapy is of dubious usefulness, although it is known that tumors arising from tissue with the same anlage, as testis, are sometimes susceptible to radiation.

The curious association of lesions of the adrenals with various types of infections must be noted. Particularly is this true in association with epidemic cerebral meningitis, the Waterhouse-Fredriksen syndrome, or "adrenal apoplexy." The lesions often include massive adrenal hemorrhages, and other less striking lesions, particularly necroses. These may also occur in measles, scarlet fever, smallpox and typhoid, and frequently commence in the zona fasciculata. In meningitis they are usually associated with profound neurotoxic symptoms, and particularly with the development of a marked rash all over the body. Tillett has observed a group of cases recently at Balti-

more. It is not known whether recovery can take place from such adrenal lesions, as they are only recognized at autopsy.

The classic example of cortical hypofunction is thought to be Addison's disease. It is rare, the admission rate at the Mayo Clinic being about 16 per 100,000. There are two principal etiological factors involved. Tuberculosis has long been recognized as the most common. In such cases, a history is often obtained of lesions healed long before in other regions of the body, particularly in the lungs, genito-urinary tract or bones. If a reliable account of previous tuberculosis can be obtained from the patient, such an etiology in a given case may be assumed to be highly probable. Fibrocaseous tuberculosis is the most common type found in the adrenal glands. With the intensive study of the clinical picture of Addison's disease which has followed the use of the newer methods of diagnosis and treatment during the past six or seven years, the importance of atrophy involving a progressive necrosis with collapse of the stroma of the cortex has assumed importance. In most of the series recently described, atrophy has accounted for more cases than has tuberculosis. Ten of our fourteen fatal cases (Johns Hopkins Hospital) have showed atrophy at autopsy. Only four exhibited tuberculous lesions, although three others died at tuberculosis sanatoria, and autopsy reports were not available.

In our series, women are in the majority, although in other statistics the disease is much more common in males. Susman has recently remarked on the prevalence of atrophy cases among women between 35 and 45, and he suggests that some strain in connection with the sex functions, possibly the menopause, may be a significant factor in giving rise to cortical adrenal atrophy.

The diagnosis of Addison's disease due to tuberculosis by the demonstration of calcification of the adrenals and the use of the x-ray has been extensively used at the Mayo Clinic, where one-third of the cases were found to show calcification. Our experience has not been so satisfactory. One case in which calcification was so demonstrated during life, showed no trace of tuberculosis at autopsy, the adrenal lesions being solely due to atrophy.

The signs and symptoms of Addison's disease may be briefly recapitulated. Pigmentation is usually the first symptom to

appear in the milder cases and may persist for a long time before any other sign appears. It occurs especially in areas exposed either to light or pressure, and develops gradually. The history frequently given is that pigmentation is noted in the autumn and is attributed by the patient to a summer's tan which has failed to fade. All degrees of pigmentation may occur, and during periods of remission it may recede. The exposed parts of the body are usually most affected, and also those portions normally pigmented, such as over the nipples, under the axillæ, about the anus, the penis or outer margin of the labia. Pigmentation is not common in the vagina itself. Points of pressure, as under shoe fastenings, the line at the margin of a corset, under tight garters or where bandages have been applied, or vaccination scars frequently show increased pigmentation. A peculiar pigmentation on which we lay stress is frequently seen in the creases of the palms or about the knuckles or nail beds. Black freckles and deeply pigmented moles are frequently seen. Leukoderma, which was described by Addison, is commonly seen. I have never seen definite changes in the retina. Most significant is pigmentation of the lips and of the mucous membranes of the mouth in individuals in whom natural racial pigmentation may be excluded. Sometimes the pigmentation is very marked indeed. Only last week I saw a man of 46 with symptoms of but two months duration whose mouth presented as extensive pigmentation as is seen in the normal full-blooded negro. There is a very definite relation between the appearance and intensity of pigmentation and the severity and progress of the disease.

The second symptom is that of asthenia and muscular weakness, which may become profound and associated with various mental disturbances and fatigue. The mechanism of this phenomenon is not well understood but disturbances of carbohydrate metabolism, of the production of lactic acid, and of liver glycogen storage, as observed experimentally, no doubt also occur in the disease. Asthenia is markedly aggravated during the crises. It is greatly relieved by treatment.

The third characteristic symptom, namely, gastrointestinal disturbances, varies with the condition of the patient. These are always aggravated during the crises and may readily be confused with acute abdom-

inal disease. Loss of appetite is one of the earliest and most constant symptoms of increasing severity of the process, and increase in appetite is one of the surest signs of improvement. The weight should be closely watched. Anorexia varies from a general absence of appetite to an utter loathing and intolerance of all food. Vomiting occurs in all grades of severity, but even patients in relatively good condition will vomit occasionally. Constipation is the rule but attacks of diarrhea are common during the crises. Acute disturbances are nearly always associated with a lowered concentration of the plasma sodium and chloride, and when these are raised to their proper levels, the distressing symptoms sometimes disappear completely. Loss of weight is frequently striking but most patients are not actually emaciated. As a result of under-nutrition, menstrual disturbances may occur but usually they appear surprisingly late in the exacerbations of the disease, or crises, which are characterized by a marked aggravation of the gastric symptoms, fall in blood pressure and marked asthenia. Terminal rise in temperature usually occurs during the 24 to 48 hours before death.

The physiological basis of the Addisonian crises probably lies mainly in the disturbed mineral salt metabolism. Recent work has also indicated that an actual antagonism may exist between sodium and potassium in this condition, the urinary excretion of potassium being prevented while a marked renal loss of sodium occurs. The kidneys seem to lose salt because of abnormal functional permeability.

This mechanism of the crises makes it possible to utilize a diet low in sodium as a diagnostic measure. This is probably the most reliable procedure at present available for demonstrating the actual presence of Addison's disease. It should not be utilized, however, if it is possible to establish a satisfactory diagnosis otherwise, as it is a serious and somewhat dangerous undertaking. For the purpose, it is usually sufficient to place the patient on a diet of fruits, or fruit juices, together with milk and sugar. In a patient with the disease, this simple régime will result in the production of a crisis of greater or less severity within twenty-four to seventy-two hours. It should never be persisted in for a longer period of time than is needed to establish the diagnosis. Often a matter of a few hours only

will make serious difference in a therapeutic response. Weakness and distaste for food are the first symptoms complained of, usually with a fall in blood pressure. If nausea and vomiting occur, a grave condition is apt to supervene rapidly and the test must be stopped at once. A positive effect is associated with a drop in the concentration of serum or plasma sodium.

The treatment of Addison's disease involves the use of ample quantities of sodium salts and of a potent preparation of the cortical hormone. It is necessary to prescribe a definite daily quantity of salt no matter how well the patient may feel. To instruct him to take a well salted diet is not enough. If capsules are given, care must be taken that they are really absorbed.

The adrenal cortical hormone was prepared in a mildly active aqueous solution by Rogoff and Stewart and by Hartman in 1927. A potent extract was prepared by Swingle and Pfiffner in 1927, utilizing procedures which had successfully been used in the chemical extraction of estrogenic substances. Beef glands are generally used for the manufacture of this hormone although it has been claimed that other types such as pork have a higher concentration.

Parenteral methods of administration have hitherto been the only ones certainly effective. Oral preparations, including a charcoal absorbate of Grollman which is effective on adrenalectomized rats, have been used from time to time, but in our experience it is disappointing in the treatment of severe Addison's disease. Other methods, as with the use of a glycerol ex-

tract, may be useful in milder cases, and the charcoal absorbate, by mouth, may be useful in such cases. The recent demonstration of the chemical nature of the cortical hormone makes it highly likely, as with certain of the sex hormones, that oral administration, to a degree, at least, should be therapeutically effective.

The effective dose of the cortical hormone depends on the strength of the preparation and the severity of the symptoms. Our method is to use it as a supplement to salt only where needed, in dosage of 1 to 5 c.c. daily. Abscesses must be watched for, and infection and fever may precipitate a crisis. Recently the use of a diet low in potassium has also been advocated by Wilder and his group. Our experience has not indicated its great value. It is not an easy diet where food aversion occurs anyway. Gland transplantation has been disappointing. The use of adrenalin, as in the so-called Muirhead treatment, has been abandoned.

All in all, the increase in knowledge of the adrenals has been very rapid in the past six or seven years and if further progress occurs we shall, within the near future, I am convinced, see very remarkable improvements in our therapeutic resources and in our ability to cope with these interesting but distressing clinical conditions. It is particularly tempting to hope that with a further understanding of the relationship of the adrenal to salt and water metabolism, and to the pituitary, that an effective aid to the treatment of shock may become available.

The plagues that once swept the world have been very largely eliminated. Every generation shows that they have given to mankind a longer span of life. Man is healthier and happier because of the mighty legionnaires of medicine.

So, to you, the Guardians of Life:—Your profession is on the threshold of vast new discoveries that will revolutionize life on this earth. For you alone remains the romance of great adventure.

No matter how far you go into this new-found continent of science yet always there is a golden chain that binds you to us. It is a magic chain. If it is ever broken your quest for the golden fleece of knowledge will be in vain. The links of that bind-

ing force are your human contacts. Though you walk with kings you cannot lose the common touch. Still the greatest joy of your tasks will be to soothe a fevered brow and to bring into world-weary eyes the light of hope.

In this new, strangely complicated civilization into which we are rushing today, to you is dedicated the great task of not only keeping Man alive, but, more:—keeping alive Man's faith in himself.

No man, no profession, has any higher call to duty: "For of the most High cometh healing."
—From the Medical Supplement of the *Detroit Free Press*, September 26, 1937. Reproduced here by permission.

CERTAIN READING DISABILITIES AS RELATED TO SPEECH*

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The difficulty encountered by many children of normal intelligence in learning to read and write has commanded the attention of several groups in our social system. Primarily, of course, the parents may be acutely distressed when confronted by such a situation. Secondly concerned are those connected with fields of education, psychology, and neuropsychiatry. A study of the problem of reading difficulties is interesting to the neurologist in that it is closely associated with the whole question of the integration and disintegration of speech.

In 1928 Orton⁴ brought out an interesting paper dealing with reversals in writing and reading as well as mirror writing and the ability to mirror read. His excellent contribution gave rise to considerable discussion, as well as some confusion, in the minds of his readers.

He referred particularly to a specific reading and writing disability occurring in children of average or above average intelligence. Specifically, he states:

"Certain features which seemed to be common to the group were: (1) difficulty in differentiating p and q and b and d; (2) a striking tendency to confuse pallindromic words like saw and was, not and ton, and to reverse paired letters and even whole syllables or words in reading so that they were read from right to left instead of left to right; (3) a considerable degree of capacity to read from a mirror—one boy actually read faster and with less mistakes with a mirror than without, and (4) a greater facility in producing mirror writing, i.e., in writing to the left with complete antitropic reversal of all letters."

In searching for an explanation of these particular difficulties, Orton brings out the theory of cerebral dominance and also that of visual levels. Before proceeding with our discussion, it will be necessary to quote him in full, particularly as regards the function and location of the visual levels and their relation to the term cerebral dominance.

"The first level serves to give awareness that a visual sensation comes from without and is not a recalled memory of things seen; in psychologic terms, this level furnishes the element of external awareness in sensation. This function, without much question, resides in the area striata or calcarine cortex of the occipital lobes. The second level, that of objective memories, serves as the storehouse for visual impressions of objects which have been seen. This function probably resides in the second type of occipital cortex which surrounds the calcarine or striate area. Up to this point the two hemispheres of the brain apparently work in unison to produce a single conscious impression; i.e., the messages relayed from the eyes to the two sides of the brain are fused so as to give only one impression. This is brought into relief by the fact that neither of these

functions is entirely lost as a result of the destruction of either hemisphere; a bilateral lesion is required to suppress the function of either the first or the second visual platforms. At the third or associative level, however, destruction in one hemisphere may result in complete loss of the associative function, resulting in inability to read (acquired word blindness), while destruction of exactly the same area in the opposite hemisphere will not give rise to any symptoms whatever. That hemisphere in which destruction produces loss of the associative function is called the dominant hemisphere, and may be either the left or the right, according to the side which habitually initiates the motor responses of the individual. *In other words, it is obvious that the visual records of one side only are used in symbolic association and those of the other are elided or inactive in this process.*"

"Structurally, however, there is no such contrast between the two hemispheres. The nondominant associative area is as well developed in size and complexity as is the dominant, and current neurologic belief (neurobiotaxis) would imply that this silent or inactive area must have been irradiated equally with the active to produce an equal growth. Such an irradiation, moreover, would presumably leave behind it some record in the cells of the nondominant side which one may call an engram. The engram in the nondominant side would be opposite in sign, however, from that of the dominant; i.e., it would form a mirrored or antitropic pattern. Under usual circumstances only one of these reciprocally paired engrams operates in association with the concept in reading, as is shown by the facts of acquired word blindness already cited, *and its antitropic or mirrored mate is elided or remains inoperative.* If, however, the physiologic habit of complete elision of these engrams of the nondominant hemisphere were not established, their persistence might readily serve to explain the failure to differentiate between p and q and between was and saw, and also to account for facility in mirror reading and mirror writing, and thus to explain those confusions of direction which have been extensively recorded in the literature and which as here described seemed to characterize all the cases of my own series. Since this conception of the disability as a physiologic variant differs so widely from the pathologic moment known to result in acquired word blindness, I have felt that the use of the term congenital word blindness was misleading and have offered the term strephosymbolia—twisted symbols—to demarcate better the series of cases showing this typical symptomatology."

When Orton postulated the idea of cerebral dominance in speech and its relation to particular reading difficulties, as mentioned above, and also when he conceived the idea of the three visual levels, he opened up the avenues for discussion of a perplexing and

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significant problem in speech integration as well as disintegration. One notes that the first level is one of visual awareness while the second level, "that of objective memories serves as the storehouse for visual impression of objects which have been seen."

In a discussion of the first level, we are immediately confronted by the psychological problem of "pure sensation" as related to meaning. Can one have memory of the visual impression of objects without realizing the meaning, at least to a certain extent, of the object? In other words, can there be such a thing as visual awareness without it being part of a perception? Must not other sensory and motor impressions enter into the picture as one realizes that he is dealing for the first time with something new? For instance, in acquiring the perception of an object such as an orange, vision, smell, taste, and touch all enter into its formation. Awareness is bound up in the definition of perception or knowing. It is difficult to conceive of being aware of anything new without its having some relation to our total behavior pattern. Vision alone would not suffice, and moreover it is a debatable question as to whether memory is the function of a localized part of the brain. Association enters into all brain function. For instance, in acquiring a perception of something new or foreign to our previous visual perception, one must necessarily use certain muscles, not only of the eye but of the rest of the body. In so doing, there is laid down motor imagery or, in other words, kinaesthetic sensation. This motor imagery is coupled with the visual sensation and, in our opinion, cannot be separated from it.

As to the third visual level (symbolic level) and the difference in the engrams of the two halves of the brain and their relations to the reversals in reading and writing, there is room for considerable difference of opinion. In the first place, it is admitted that in the first and second visual levels the "two halves of the brain apparently work in unison to produce a single conscious impression: i.e., the messages relayed from the eyes to the two sides of the brain are fused so as to give only one impression." With that we agree and we are of the opinion that in the so-called third visual level, that level in which a symbol represents an object, the same mechanism takes place. We believe that the visual engram on the "dominant" side is the same as that on the

"nondominant" side and that there is no more reason for a reversal in visual memory of symbols than there would be in reversal of visual memory of objects. If, for instance, there were curved lines or scroll work on an object such as a chair, the visual engrams in the dominant and nondominant sides of the brain would be mirror patterns of each other and therefore could not fuse as is claimed for this level (visual memory of objects). Moreover in mirror writing where a reversed visual engram is presented, the child may and usually does write the mirror image never having seen it before. If we consider the visual engram only, how can one produce a reversed visual image never having seen it before? To that query, one might counter by asking still another question: How is it possible for the child so afflicted to read mirror writing which he never has seen before, faster than he can read normal writing? We will attempt an explanation not only of the last question but of the problem of reversals as a whole.

In the first place, it is well to mention that reversals in reading and writing occur principally in the left-handed child and according to Monroe are more common in the left-handed child who uses the right eye as the fixing eye than in the left-handed child who uses the left eye as the fixing eye. In the second place, we consider the problem to be principally a motor one, but not entirely so as will be brought out by further discussion. The work of Coghill¹ on amblystoma and his association of that work with the theories of the Gestalt school of psychology has an important bearing in our interpretation of the problem. He says: "The Gestalt school of psychology stands for total unity as the dominant principle governing mental processes. It seems, however, to have been concerned wholly with the processes that condition behavior, and to have entirely neglected the processes which determine the form of the behavior pattern. According to "Gestalt," a simple, pure or elementary sensation does not exist as such. There are no such units which combine to form perceptions. The perception is a "quality upon a ground": a total unity from the first. The apparently particular elements in consciousness emerge from a general field and exist only in relation to that field. This is equivalent, in the motor phase of the organism, to a totally integrated pattern in which par-

tial patterns become more or less individuated.

"This principle is thoroughly demonstrated for *Amblystoma*, a typical vertebrate, and there is nothing in our knowledge of the development of behavior to indicate that the principle does not prevail universally in vertebrates, including man. There is no direct evidence for the hypothesis that behavior, in so far as the form of the pattern is concerned, is simply a combination or coordination of reflexes. On the contrary, there is conclusive evidence of a dominant organic unity from the beginning. That evidence appears not only in the manner in which behavior develops, but particularly in the manner in which the nervous system puts the principle into effect, for, as shown in the first lecture, the nervous system concerns itself first with the maintenance of the integrity of the individual, and only later makes provision for local reflexes." For instance, he explains that "the first limb movement is an integral part of the total reaction of the animal and that it is only later that the limb acquires an individuality of its own in behavior. The local reflex of the arm is not a primary or elementary behavior pattern of the limb. It is secondary and derived from the total pattern by a process of individuation. In the further development of the behavior pattern of the arm, the same principle is observed: The first elbow flexion occurs with action of the arm as a whole, and the forearm only later acquires the independence of a local reflex. *So also is it with the movement of the hands and the digits.*"

Herrick,³ in his comprehensive studies on comparative anatomy and physiology, expresses much the same idea when he states:

"In the course of this evolution we can follow the transition from the simplest sort of *mass-action* to very complex reflex and instinctive patterns and from the latter to control of behavior by individually learned and cortically directed analysis of experience, which culminates in the fabrication of conscious symbols and rational control. On the structural side we see a gradual transfer of the center of psychological dominance and integration from the midbrain to the striothalamic complex and, in the third stage, to the cerebral cortex parallel with the shift from physiological conditioning to intelligently directed motivation."

The evolutionary significance of some of our simple body movements would seem to fit in with the above theory. We will consider, for instance, one individual set of movements, such as the spreading of the fingers of the right hand, a movement which may have been connected with swimming. One can readily see that such a voluntary movement executed with any degree of accuracy would necessarily come later in our development than voluntary movement of the extremity as a whole. The similar set of spreading movements of the left hand is developed at the same time, particularly when regarded with coordinated acts such as swimming. On analysis, we notice that these movements of not only the fingers of the two hands but the arms in swimming movements are mirror images of each other.

They are much more easily executed than if one attempts to adduct the fingers of one hand while spreading or abducting those of the other. Whatever highly individuated reflex motor patterns are acquired by one side of the body, their mirror patterns are acquired by the opposite half of the body, but not to the same degree of accuracy in their execution. These engrams, or patterns, although called motor are in a sense sensory or more accurately sensory-motor in that we record in our mind a memory of the movement. This is kinesthetic sensation or motor imagery. The same motor imagery or kinesthetic sense is involved in such a highly complicated act as writing. It has been observed previously² that the average right-handed person is able to write mirror writing with the left hand when, simultaneously, he is writing with the right hand and in the opposite direction; that is, from left to right. However, in so doing the mind must be kept on the writing which is being carried out by the right hand and the left hand be allowed to simply follow along and assume its own course. The writer has noted that a left-handed individual who has been trained to write right-handed does not make this mirror pattern when writing with the pencil both in the right and the left hands. The same reflex mechanism occurs in making loops or circles when using, simultaneously, one pencil in the right hand and another in the left; that is if the direction of movement with the right hand is clockwise that with the left hand is counter-clockwise. In the process of acquiring integration of this clockwise movement with the right hand, the eyes in conjugate movement rotate in clockwise manner. We have observed that the right-handed person can rotate the eyes clockwise much faster and in better coordination than in the opposite direction. Rotating them in the opposite direction is comparable to a right-handed person attempting a left-handed movement.

If it so happens that in the right-handed person the left eye is the fixing eye or in the left-handed person the right eye is the fixing eye, one naturally would expect that the head would be inclined to turn toward the side of the handedness. This asymmetry of handedness and eyedness adds much to the confusion in the child's mind as to the acquiring proper direction of movement in both reading and writing in

that it has a tendency to disrupt the total pattern acquired previously.

If one has difficulty in acquiring the proper direction of movement in learning to write and read, is it not reasonable to assume that he has the same confusion or difficulty in acquiring visual perception of an object? The eye movements take part in the process of acquiring that visual perception, and it is quite possible that when one first perceives an object, the conjugate eye movement is from right to left in a left-handed individual. This right to left movement is undoubtedly accentuated in the left-eyed person. Thus, when a child of this type is first presented mirror writing for inspection, the conjugate eye movement used is from right to left, and there is an immediate association with the motor imagery, which already has been laid down as a part of the total pattern when he was learning to write with the right hand. Thus the reason for reading mirror writing faster than normal writing is explained. The engrams are visuo-motor and the body movements of the whole left side form the dominant pattern, but one must not lose sight of the fact that they are a part of the total pattern.

One often notices the left-handed person write with the hand in what can best be described as an "upside down" position (acute flexion of the hand on the wrist), with the point of the pen facing the writer. If one stops to analyze that movement, he will find that although the pen moves from left to right, the hand movement itself with relation to the rest of the body is a right to left movement.

In certain cases of aphasia, one may encounter directional confusion not only in reading, writing, and spelling, but also in arithmetic. This was admirably demonstrated in a case reported by Singer and Low.⁶ We have been interested in a case which has, in our mind, an important bearing on the problem.

Mr. T. D., an accountant of forty-eight years of age, suffered a severe cerebral concussion a year and a half previous to his first visit to my office in August, 1932. At that time, he still complained of difficulty with his vision, a certain amount of headache and dizziness, and inability to calculate with any degree of accuracy. He also had noticed that he was occasionally writing "was" for "saw" and vice versa. He made numerous mistakes in typing, almost all of which he was unaware. As a child the patient was distinctly left-handed, but he had been forced to learn writing with the right hand.

The eye consultant reported the following: "Vision, 6-6 in each eye. This is slightly worse than

before. There is one degree of exophoria for distance, four for near. The abduction is five and the adduction is four. The fundus and tension of each eye are normal. The fields show a marked change, there being a left homonymous hemianopsia for both form and color. The remaining form field is considerably contracted in the right and greatly contracted in the left eye. The fields are not tubular and do not have the characteristics of either hysteria or malingering." Fields taken five months later were practically identical with the above. Central vision was preserved in either eye.

The defect in the visual fields would necessarily point to a lesion of the right optic tract posterior to the chiasm. And yet with the visual memories of the right occipital lobe not functioning, the patient presents the recent problem of reversals. This case would seem to point strongly to the fact that the difficulty is not primarily visual but kinesthetic.

There is still another interesting as well as perplexing situation as regards certain aspects of cases of so-called total aphasia. The lesion is usually confined to the "dominant" hemisphere and, as in a recent case of mine, resulted in a complete right hemiplegia, the left side being normal in all respects. The question is: "Why is there total aphasia and why should not the individual have retained speech up to the five year level, the time at which his handedness first began to function as regards reading, writing, and spelling?" One would surmise, without being definite by any means, that even with the acquisition of the earliest perception of speech, *handedness and motor imagery involving all muscles of speech* had entered into this physiological and psychological problem. Further, if the handedness as a factor in the motor imagery is interfered with by the paralysis, speech is destroyed as far as the earliest levels. The total pattern of the five-year level has been disrupted.

Another interesting phase of this whole problem is the possibility of an hereditary basis in connection with handedness. Monroe states that according to her tests, about eleven per cent of children in one group were left-handed. This left-handedness persists regardless of the fact that they are living in a right-handed world. Suppose the conditions were reversed. We should then undoubtedly find that the same percentage (eleven) were right-handed. We have then the two extremes, of left- and right-handed individuals, whose adaptability is such that they would remain right- or left-handed regardless of the handedness in their

environment. Together they constitute from twenty-two to twenty-five per cent, while the group in between the two extremes with balanced body symmetry constitutes seventy-five to seventy-eight per cent. The latter group becomes right-handed in a right-handed world, or would become left-handed in a left-handed world. Then, according to all the laws of probability and chance, there are at birth as many left-handed people as right-handed people, and the three to one ratio exists only as regard body synergy and asynergy.

This theory would account for the adaptability of the Semitic race, who were at one time supposed to be left-handed (Critchley) and to have written from right to left, while at present the opposite is true. It does not seem probable that if cerebral dominance were the initial factor in the question of handedness and its allied problems, the handedness of a race or any part of it would change so completely from one type to another. That does not happen, in our opinion, according to laws of heredity.

However, according to the theory which we have postulated above, a change of handedness and direction of writing could easily take place because seventy-eight per cent or thereabouts are in perfect body balance or in a condition of perfect synergy as regards the two halves of the body at birth.

What, then, is the practical application of the whole question as regards the parent and teacher? And what steps should be taken to aid in alleviating the situation? We offer the following suggestions, almost all of which are in agreement with those as noted by Orton.⁵

First, the handedness and eyedness of the child should be determined as nearly as possible by the kindergarten teacher.

Second, psychological tests should be given for visual and auditory memory, and for the defects in association between the two.

Third, if there is confusion as to the handedness, it would be well to encourage the child to use the hand on the same side as is the fixing eye. In this way, one encourages the development of reading, writing, and arithmetic as evolving from the total pattern.

Fourth, in the teaching of writing to the left-handed child, allow the paper to be placed at the left upper corner of the desk, and allow and even encourage the child to

write backhand. The teacher, in marking such a child in writing, should not compare his work with a right-handed standard, but with a good backhanded slant.

Many of these children acquire ideas of inferiority through their inability to conform to a right-handed pattern.

Fifth, the left-handed child who is having difficulty in reading, writing, or spelling, should be given an opportunity to read aloud and to use a pointer as in reading at the blackboard. If there is extreme difficulty, allow him to use the forefinger of the left hand in reading from his book. In that way all of these motor movements, such as tongue, lips, and finger, which grow out of his total pattern, aid him in establishing the proper direction (left to right).

Sixth, inasmuch as this type of case is apt to have confusion in the visual patterns on account of confusion in direction, it is well to stress the phonic method of teaching early in their school career. They should learn the alphabet and fundamental syllables, and learn to build up words from the fewer number of symbols than the visual-minded child who is also right-handed, and in whom the patterns fit with his previous total pattern.

Seventh, on account of the asymmetry of the pattern in the left-handed child who is constantly forced to move in a different direction from that which is normal to him, he is apt to show disturbances in rhythm, so that early in his speech training he should be taught simple rhymes, poetry, and music. Few of us realize the rhythm expressed in the eye movements in our ordinary silent reading.

Very little provision has been made in the average school class room for the left-handed child, when one considers the awkward and even fatiguing position the left-handed child must assume in using a seat or recitation arm rest that is built entirely for the accommodation of the right-handed child. All that is necessary for us who are right-handed to realize this is to imagine the inkwell and arm-piece in the recitation room placed on the left side.

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NEUROSYPHILIS—THE IMPORTANCE OF EARLY DIAGNOSIS AND NECESSITY OF SPECIALIZED THERAPY*

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We are all familiar with the tremendous effort that is being made to wipe out syphilis in the United States. This concerted attack on "Public Enemy Number One" among the dread diseases affecting human life is a great step forward in the betterment of mankind. However, stamping out or preventing the development of new infections is not enough. Our institutions for the blind and insane will continue overcrowded for many years to come unless a more specific effort is made by the Medical Profession to recognize and properly treat early neurosyphilis. One might almost refer to the neurosyphilitic as the "forgotten man" in the treatment of syphilis. To my mind, too great emphasis is placed on blood serology and routine mass treatment, and far too little importance attached to the spinal fluid examination.

According to a recent report compiled by the Coöperative Clinic Group,¹ nervous system involvement was present in 53.4 per cent of the cases in which spinal fluid examinations were done. The Mayo Clinic⁵ reports, on repeated surveys, that 65 to 78 per cent of the syphilis seen there had a neurosyphilitic aspect. Nervous system involvement, therefore, must be recognized as a potentiality in every case of syphilis, and, since the spinal fluid examination is the only positive diagnostic procedure, it seems inconceivable that such a simple, precautionary method is so often neglected.

I know of no satisfactory routine method of treating syphilis. Each case presents its individual problem and requires individual treatment. Proper treatment procedures, then, lie solely within the discretion of the attending physician. Unfortunately, the use of fever therapy has been almost entirely confined to institutional practice and the hyperpyrexia machine is not available to many physicians, especially those in the smaller communities. Routine mass treatment, consisting of continuous injections of arsenicals and heavy metals, unquestionably will reduce the incident of neurosyphilis, but far too many nervous system involvements develop under this mode of treatment to allow us to assume it is adequate in arresting this phase of the disease. The arsphenamines and heavy metals do not permeate the nervous tissue in sufficient

quantity to effectually cope with neuro infection due to the hemato-encephalic barrier, making supplementary and special therapy procedures mandatory. I believe it is an accepted fact that the use of fever therapy is imperative in the treatment of paresis and taboparesis. Authorities differ as to the comparative merits of hyperpyrexia induced by external methods and heat produced within the body. The shortage of hyperpyrexia machines and the cost to the patient may be the determining factors in many instances. Fortunately fever therapy, produced by malaria or typhoid vaccine, is available to all at a comparatively low cost. Citrated malarial blood, which will remain infectious at almost any temperature for at least 48 hours, can be procured from almost any public medical center.

The favorable results and apparent clinical arrest of nervous tissue deterioration by the use of fever therapy in asymptomatic neurosyphilis, where this diagnosis is made by spinal fluid examination, range with different observers from 95 to 100 per cent. Wile and Hand⁶ report arrestment in 95.7 per cent of cases. Moore,³ in his "Modern Treatment of Syphilis," reports complete remissions in 30 to 40 per cent of paretics treated with fever therapy, but only 3 to 5 per cent complete remissions where routine arsphenamine and heavy metals were used. These figures certainly argue convincingly in favor of fever therapy.

With the induction of malaria, the question of possible danger to the patient naturally arises. Here, again, the importance of early recognition of neuro involvement should be emphasized. Certainly better therapeutic results may be expected and the risk to the patient minimized if the treatment is begun early in the course of the disease,

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before extensive tissue damage has occurred. Then, too, induced malaria is easily controlled, differing from the natural disease in its great susceptibility to quinine.

Typhoid vaccine, though not as extensively used, certainly has a definite place in neurosyphilitic therapy, especially in certain cases where malaria is contra-indicated. Typhoid vaccine, being much easier to obtain, can be used in isolated communities where the use of malaria is not feasible, and in cases proving immune to malaria. The mortality rate is exceedingly low in this method of treatment and authorities such as Kulchar and Anderson² contend that it compares favorably with other forms of fever therapy.

Touching briefly on intraspinal therapy, I believe its value in the treatment of syphilis is a debatable question among syphilologists. However, I am of the opinion that medical science has not as yet developed an adequate substitute for intraspinal therapy in the treatment of primary optic atrophy and tabes dorsalis. Moore,³ together with other notable authorities, reports an improvement or arrestment in more than 50

per cent of primary optic atrophy treated by intraspinal therapy. Considering the excellent results obtained from its use, and considering the fact that optic atrophy results almost invariably in complete blindness under routine arsphenamine and heavy metals, it would seem that the merits of intraspinal therapy must be acknowledged.

I have made no attempt here to go into detail regarding treatment procedures, and have purposely omitted mention of trypanamide and other therapeutic measures because the purpose of this paper is simply to emphasize the crying need of an early diagnosis and the use of specialized therapy in the treatment of neurosyphilis.

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EDUCATION IN MATERNITY ESSENTIAL TO PUBLIC HEALTH

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It was in 1912 that the first Bureau of Child Hygiene was established in a city health department in this country as a permanent part of that administrative branch of civil government, and in 1914 the first such bureau was developed in a state department of health.

Dr. Josephine Baker, the director of the Bureau of Child Hygiene in New York City, created as a major activity for the protection of infancy and childhood the Little Mothers' Leagues in the high schools of that city, through which even more than by the baby stations was the process of education of mothers in the care of their children successfully promoted.

Progress in the breadth, depth and quality of education for the saving of infant lives has been continuous and effective in the past quarter century until we now enjoy throughout the nation lower infant mortality rates than have prevailed at any time in human history among so large a population under one government and including such a variety of race stocks, economic and occupational conditions, distributed so widely in geography and climate.

From concern exclusively with the survival of the babe at least through its first year of life and with the diarrhea and en-

teritis which was the chief hazard to its life, the scope as well as the name of the bureaus or divisions of health departments serving this constantly expanding and perhaps most important of all the fields of public health, has been broadened to include every stage of the human reproductive cycle from the conception of the new life to the achievement of bodily and mental maturity.

We now have as a declared and established standard function of local, city or rural, state or provincial and national or federal health services in most modern na-

tions that of the bureau or division of maternity, infancy and child hygiene.

To such an audience as this it is quite unnecessary to recall to your attention or to review the subdivisions of this field in any detail, noting only that there are services to be rendered, preferably by the private practitioner of medicine in his intimate personal relation to the individual and the family for the guidance of the expectant mother, the protection of the infant, the periodic supervision of the runabout or preschool child, the health management of the life of the child while it is still subject to the compulsory education laws and until it is free to enter industry and self-support, at approximately the age of maturity or a few years before.

What more could be asked of public health authorities than to promote through public information, to develop by educational methods, to supplement by services for those unable to meet the cost of private medical guidance in health, the comprehensive range of professional activities of the practising physicians of the community on behalf of the survival, the integrity and vigorous health of the family, which is, after all, the basic unit of our modern society and never more precious or essential than now to a continuity and progress of our civilization?

This is the sort of challenge which rises to face the health officer and the community he serves, whenever he begins to feel satisfied or complacent with his health program and its progress.

We might as well admit that we shall never achieve an end point, a perfection of endeavor for health, as long as the curiosity and resourcefulness of the human mind continues to discover new biological facts and improvements in their application.

While new knowledge is often disturbing, generally criticized, and usually uncertain in the results it leads to, it must be accepted as an axiom among sanitarians and practitioners of preventive medicine that whatever is true and affects favorably the quality, quantity, creation or survival of human life is worthy of study and practice.

The reasons for our present discussion are that the embryologists, comparative anatomists, general biologists, chemists, sociologists, statisticians, as well as psychiatrists, obstetricians, gynecologists and pediatricians among the specialists of medicine have made

new observations and developed new facts and technics which have disturbed the traditional patterns of contemporary thought, and social usage, and have challenged the medical profession, legislators, the courts and society itself to take action consistent with the facts, lest damage develop to the most precious values of human relationships, and a hazard to national and cultural survival become acute.

Facing facts always calls for courage, and one way of measuring mental and emotional maturity and health, whether individual or social, is the manner in which persons, the family and the community face new facts and alter their conduct and attitudes according to the evidence and ethics of the situation.

And now, I see from your faces that you wonder what this glimpse into well-known history, and the repetition of philosophical generalities have to do with the practice of public health in Michigan or with the interests of the Maternal Health League of this state.

Just this, that in the past few decades it has become obvious from a great mass of detailed and corroborated information, coming from the several fields of science already referred to, that further protection of women in both the unmarried and married state against unsuitable, undesired or unsafe pregnancy requires a variety and quality of information not universally available to men and women under competent or responsible authority.

Furthermore, that many of those intending marriage are crudely ignorant of the mutual biological and psychological obligations, hazards and opportunities of the married state, and that such ignorance commonly leads to much marital misfortune and is one of the factors leading to divorce which occurs in one of every six marriages in the United States and to the prevalence of abortions undertaken for other than distinctly pathological conditions in the mother, and carried out under conditions which lead to an enormous loss of maternal life. About one quarter of all maternal mortality follows abortions. About one half of all abortions are illegal or criminal. There is about one abortion for every two or three pregnancies. More than half of the women who have borne children have had one or more abortions. Ten per cent of all abortions are

in unmarried women. The five major external factors leading to abortion are, economic distress, occupational necessities, illegitimacy, domestic relations, and fear of confinement.

However, probably more important than either the protection of the body of the married woman against uncontrollable conception, or the hazard to the mother of artificial interruption of pregnancy, is the potential benefit to offspring from understanding by the parents of the biology of conception and the principles of marital hygiene. It would appear obvious that such knowledge as is in the possession of mankind bearing upon the quality of inherited characteristics and upon the encouragement of superior, and the gradual diminution of inferior, elements in human stock, can be applied chiefly although not exclusively through the education of young men and women prior to and during married life in the years of potential productivity.

With a falling birth rate throughout all occidental nations, and a selective and relative infertility of those elements of our population from which the best quality of human stock should be expected, there are good theoretical and practical reasons for providing under official and approved voluntary auspices such sources of information as will tend to contribute to racial improvement, and to counteract by encouragement of childbearing among the fit and competent the present deteriorating effect of unconsidered procreation among those least able to create offspring and rear them in health.

Specifically, it appears to be necessary and timely for official health agencies of state and local government to add to the existing functions of their bureaus of maternity and child hygiene that of marriage advice and of counselling in the interest not only of a eugenic effect upon the next generation but as a very immediate and practical means of reducing maternal and neonatal mortality.

The question of legality of advising on contraception was settled by the decision of the Federal Circuit Court of Appeals for the Second Circuit, in December, 1936, in the case of *United States vs. One Package*, parts of which I quote:

"It is true that in 1873, when the Comstock Act was passed, information now available as to the evils resulting in many cases from conception was most limited, and accordingly it is argued that the language pro-

hibiting the sale and mailing of contraceptives should be taken literally, and that Congress intended to bar the use of such articles completely . . . yet we are satisfied that this statute . . . embraced only such articles as Congress would have denounced as immoral if it had understood all the conditions under which they were to be used.

"Its design, in our opinion, was not to prevent the importation, sale or carriage by mail of things which might intelligently be employed by conscientious and competent physicians for the purpose of saving life, or promoting the well-being of their patients. . . . The policy of Congress has been to forbid the use of contraceptives if the only purpose of using them be to prevent conception in cases where it would not be injurious to the welfare of the patient or her offspring; it is going far beyond such policy to hold that abortions, which destroy incipient life, may be allowed in proper cases, and yet that no measures may be taken to prevent conception even though a likely result should be to require the termination of pregnancy by means of an operation. It seems unreasonable to suppose that the national scheme of legislation would involve such inconsistencies and should require the complete suppression of articles, the use of which, in many cases, is advocated by such a weight of authority in the medical world."

Health officers, therefore, under this decision, should not be legally hampered in adding contraceptive service to the existing functions of their Bureaus, unless, as in the case of Massachusetts, state laws constitute a barrier which, in Michigan, is not the case.

As has occurred in so many of the fields of public health, private initiative and resource, the vision of individuals, and the social concern of groups of like-minded and public-spirited citizens, have preceded the necessarily more slowly moving and conservative action of agencies of civil government. Practically all the innovations in the field of maternity and child hygiene, of visiting and public health nursing, of the practice of preventive medicine in tuberculosis, syphilis, gonorrhea and industrial hygiene, now all included in the programs of health departments, were proposed, tested in practice, found to be effective and promoted to the public by non-official agencies before they were accepted as necessary by health departments, or tax monies were provided for their operation.

It is now almost ten years since the Ministry of Health of Great Britain permitted, and five years since it formally endorsed, the inclusion of contraceptive advice and marriage counselling among the duties of local maternity centers by physicians competent in gynecology. For much longer periods have these functions been served in some other European countries by government, through health and school officers and by authorized activities of churches of all denominations, and by non-official or voluntary associations with interests similar to those of the Maternal Health League of Michigan.

In the United States today there are in operation not less than 311 consultation centers under voluntary auspices, 123 supported in part or wholly by public funds, and of this number 39 are in city or county health departments where some or all of the educational and technical services are now offered and availed of within the law to a constantly increasing extent. Of the total of 434 such centers in forty-two states of the United States, 353 are medically directed.

In addition to these centers, which are primarily for contraceptive advice, during the last few years an increasing number of marriage advice and consultation bureaus has been set up.

Among these are four in New York, three in California, two in Ohio, and one each in Illinois, New Jersey, Pennsylvania, Michigan, and Massachusetts. In each of these bureaus people who have studied the problems of marriage and are competent to give helpful advice, act as consultants.

While I am of the personal opinion that the kind of information which is needed and the character of consultation called for should under ideal social and professional relationships be provided in the normal activities of the family physician at his office or in his patients' homes, I recognize the fact that medical and social education of physicians in the past has not prepared many of those now practicing to meet unaided the reasonable demands for information and guidance of those considering or actually entering upon marriage, and for this reason it seems to me essential that, with the cooperation of voluntary or governmental hospital out-patient departments or independently, but in any event with the close collaboration of the organized medical profes-

sion, and with the helpful assistance of the public health nurses and social workers of the community, each full time unit of local public health administration provide itself, or encourage the establishment under private auspices of a consultation and advice service for men and women, married and unmarried, where information related to the function of reproduction, be made available for the purposes of reducing sickness and death among women and children.

This responsibility seems to me of a kind which must be accepted, if for no other reason, because misinformation of a mischievous and misleading character is now being commercially promoted for purposes of profit or immorality to the discredit of biology and the detriment of contemporary society. The best way to correct abuse born of secrecy, shame, fear and prudery is the responsible statement of facts to those capable of understanding them by persons legally authorized to practice medicine.

That this proposal is not merely the dream child of a moment of wishful and visionary thinking on my part can be understood from the fact that since 1931 I have been an officer of the National Committee on Maternal Health, and its predecessor the local committee, with its offices at the New York Academy of Medicine. Under the auspices of this committee have been carried on continuously through the past fourteen years medical and social research in the field of fertility and sterility as these bear upon maternal health, and most of the important professional contributions in this country to our present medical knowledge of contraception and the methods and results of the various methods of its application have been published under the auspices of this committee.

Furthermore, I venture to quote from two professional contributions I have offered elsewhere on this subject, one before the American Public Health Association in 1934, the other to the annual meeting of the American Eugenics Society as a report of a sub-committee of the Public Health Relations Committee of the New York Academy of Medicine in 1937.

In an address at Pasadena, in 1934, I ventured the following statements and have had no reason since then to alter them:

"Closely related to the problem of syphilis, which is primarily one for physicians, sanitarians, nurses, and educators to solve, is that of a health service for marriage advice, primarily in the social inter-

est of family security, but inseparable from medical, legal, and educational implications.

"From the early, much criticized, highly controversial, sometimes legally interdicted efforts to translate biological knowledge into common usage by married women and their husbands, through offices or clinics, as frankly contraceptive information, by persons of medical or less competent qualifications, there has been abroad and in the United States a steady growth in the understanding of the useful functions such agencies might serve, the social and educational and preventive medical concern they have for a mature society, and the auspices under which they may safely be operated."

"Since the origin of marriage counselling in 1922, under public control in Vienna, the German speaking countries of Europe have developed a total of 1,100 such centers, of which 900 are under private auspices. The first official bureau was opened in Berlin in 1926; Switzerland opened official marriage advice bureaus in Zurich in 1931 and Basle in 1933. Approximately three quarters of those who come for advice are concerned with problems of sterility, contraception, therapeutic abortion, and medical conditions contraindicating pregnancy; the majority of the remainder seeking information on questions of inheritable and congenital defects and disease, where mental abnormality, tuberculosis, and syphilis exist or are suspected in the family; and a substantial number are concerned with the physiology and pathology of sex adjustment, before and during wedlock. These stations are under some appropriate legally recognized religious, health, educational, or other professional auspices such as we are familiar with in the origin and promotion of prenatal, baby health, tuberculosis, and venereal disease clinics in this country."

"The greatest service of the agencies at present operating in the large and small cities of the United States, aside from their contribution to competent professional education in contraception, is that of preventive medicine in the fields of venereal disease and pelvic cancer."

"... For our needs at present in this country a physician, nurse and social worker especially prepared for such a responsibility will be required at each such station."

"Both mental hygiene and social hygiene, as these terms are used in our countries, should benefit by the official inclusion of a marriage advice service under the health department or in connection with the outpatient service of a general hospital."

"This innovation will require some social initiative, imagination and courage, in all of which it should be expected that the health officer should share or actually lead."

"Let us teach for the sake of women the knowledge which will permit them to choose the time and circumstances of their own childbearing."

If I were to express the objective to which I believe the more wide-spread availability of marriage counselling would contribute it would be about as follows:

"Let us set aside a fair portion of our determination to see to it that the babe is well born, into a world free for the exercise of his entire capacity for advance of his own and his fellows' lives, without sacrifice of the lives of others as a condition of his own survival."

Among the elements of a program for the practical application of eugenics I offered the following:

"It seems to me that no hindrance of tradition, re-

ligion, law or social fashion of conduct can long delay the progressive spread of a body of fact increasing in accuracy and practical usefulness and safety which will free women of most of the uncertain, accidental, and almost thoughtless occurrence of pregnancy.

"Only when the circumstances of a new life can be calculated, predetermined, chosen with forethought and planned for, and, per contra, undesired and undesirable creation of life can be with certainty and safety prevented, shall we have the essentials upon which to build a manner of family, the begetting and rearing of children, to satisfy the reasonable ambitions of those who would apply genetics for eugenic ends."

"All knowledge has carried hazards of misuse. Many a priceless fact has been exploited for selfish ends."

"However, curiosity is perhaps man's most precious attribute after his capacity of inhibition or self-control."

"The medical profession exercises, as it were, the trusteeship of society in all sciences and arts which may prevent disease, and make its occurrence more bearable, and less likely to shorten life. Society will do well to demand of medicine that it consecrate its treasury of resources and its good repute to the even broader and more enduring values of constructive guidance to better structure and function of man's body, to a more perfect life of thought, and emotion, conduct and social adaptability, and to the longest span of human life which is consistent with continuous use and happiness to the end."

Let me repeat my recommendation that official state, municipal and rural health departments where served by full time health officers in the State of Michigan include in their program of services the counselling of men and women in the hygiene of marriage and where necessary in the control of conception in the interest of the health of mother and children in the family.

If this objective cannot be achieved through tax supported official agencies the necessary services should be encouraged, when they are supplied by voluntary efforts acceptable to the medical profession.

Probably a greater reduction in the mortality of women from causes related to their reproductive function would result from general knowledge among married people of the safe and effective means of controlling conception than we can achieve by any other resource at our disposal.

An understanding coöperation among practicing physicians, local health officers, nurses and social workers is necessary in this as in other fields of maternal and child hygiene. These four groups concerned with preventive medicine should be able to carry out the simple educational effort required without offense to any of the good qualities of modern society and with definite benefit to the health of women and their children.

SULFANILAMIDE IN UROLOGIC INFECTIONS*

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In the brief span of three years since its introduction¹⁰ probably no form of chemotherapy has attained such universal acclaim as sulfanilamide. It has been employed in an effort to combat infection of all types and in many cases with considerable degree of success. The mechanism of its action has been studied by several, including Colebrook and Kenney⁵; Long and Bliss.²⁰ The fact that it is excreted to a very marked degree in the urine in either its free or conjugated form has been demonstrated by Long and Bliss²⁰; Marshall, Emerson, and Cutting²¹; Helmholtz and Osterberg.¹⁵

While not proposed originally for use in the urologic field, it has nevertheless, as we are all aware, captured a leading position among our therapeutic weapons in infection of the uro-genital system.

R. D. Herrold¹⁶ in February, 1937, observed that the urine obtained from a patient receiving sulfanilamide remained clear upon incubation and thereupon administered it to patients with infection of the upper urinary tract with surprisingly successful results in some cases wherein other recent therapeutic agents, including mandelic acid, had failed of such accomplishment. He¹⁷ very kindly suggested it for our use upon the seventh of March with the view of evaluation as to its action in all types of urinary tract infection, including gonorrhea. We have since that date kept careful records of these patients more with the purpose of reaching our own conclusions rather than from that of subsequently reporting our findings.

The results of this study demonstrated to our satisfaction several facts which appear incontrovertible and all of which have without question previously been reported elsewhere from some special viewpoint. We have endeavored to correlate all the advantages and disadvantages as they have appeared in this group of cases. The vast majority of these were private patients of an ambulatory character though a few were hospitalized. This group may be said to fairly represent the type of case consulting the average private practitioner who does not have available institutional supervision or control.

We have endeavored to determine the efficiency of this new agent as compared with other forms of therapy as well as evaluate the reactions of the drug as to fre-

quency, character, and degree. This group of cases includes only those urinary tract infections uncomplicated by obstruction or those in which the obstruction has been relieved, and it is possible that the ultimate risk in the administration of the drug is definitely increased in the presence of obstruction, as pointed out by Marshall, Emerson, and Cutting²¹ and R. D. Herrold,¹⁶ the excretion being possibly delayed with impaired renal function, and one may raise the question that the physiologic saturation point of the body might be definitely elevated in such cases. Evidence that such is not the case, however, is advanced by Cook and Buchtel⁷ in reporting two cases placed upon sulfanilamide treatment in whom the urea nitrogen exceeded one hundred milligrams per one hundred cubic centimeters without untoward result.

In all, two hundred and three cases with an additional eleven cases studied separately by one of us (J. F. Harrold) have been considered in this survey, additional cases having been discarded for lack of complete data. These cases were grouped as follows: Gonorrhea (male), eighty-five; gonorrhea (female), fourteen; urethral stricture, seven; non-specific urethritis, twenty-five; pyelitis (male), seven; pyelitis (female), forty-four; postoperative, twenty; renal tuberculosis, one.

It has been pointed out by many^{1,3,5,6,9,11,13,14,18,19} that the use of this agent is not without danger and a careful record was kept of all patients under treatment from the point of view of determining the deleterious effect, if any, from the symptomatic reactions. These we find, as has been observed by almost all authors, were extremely varied and occurred to some degree in the surprising number of one hundred eight patients

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out of a total of two hundred three. In no case was symptomatic reaction suggested to the patient but all complaints were volunteered. A number of patients complained of several and varied symptoms and for the sake of discussion we have grouped these into four general headings: Gastro-Intestinal, Central Nervous System, Dermatoses, and Systemic.

TABLE I. REACTIONS

Gastro-Intestinal:	
Anorexia	6
Nausea	32
Vomiting	3
Diarrhea	1
Total	42
Central Nervous System:	
Headache	8
Vertigo	14
Tinnitus	0
"Nervousness"	8
Paresthesia	2
Total	32
Skin:	
Pruritic Dermatitis	4
Purpura	2
Total	6
Systemic:	
Extreme Malaise	8
Fatigue	68
Cyanosis	10
Fever	3
Anemia	4
Total	93

It is noteworthy that a number of patients complained of three or four of these various reactions simultaneously. In all of our cases reactions subsided within from one to six days following the withdrawal of the drug and the increase in the fluid intake. No permanent deleterious effects were noted. In all of our cases of maculo-papular dermatitis there was a disagreeable associated pruritus. In one case of the purpura the purpuric areas were exquisitely sensitive and the other insensitive. In one case of febrile reaction seen in consultation, the elevation of temperature reached one hundred four degrees and dropped to normal within eighteen hours after withdrawal of the drug and intravenous infusion. Several instances of fatigue have been profound. In three cases individuals required assistance home from work.

The dosage apparently did not greatly in-

fluence the reaction of the patient, some of our worst reactions having occurred on relatively small dosage of thirty grains daily whereas a number of cases showed no untoward effect from eighty grains daily. With very rare exceptions the patient complaining of reaction suffered identical reaction if the drug was re-instituted and we must agree with Brunsting and others that about ten per cent of cases were intolerant to the drug from some viewpoint. Skin tests were attempted to determine hypersensitivity and met with apparent failure in the experience of several authors^{12,14,22} as well as in that of one of us (J. F. Harrold). It would appear impossible to predict any of the toxic manifestations from this drug as they might obtain on the patient for whom we may wish it employed.

In our experience the female apparently tolerates the drug less well. Further, that this individual idiosyncrasy or sensitivity does apparently bear relation to average dosage. Thirty-nine of our cases reacted on moderate dosage, forty grains daily or less, whereas sixty-seven reacted upon dosage from forty to eighty grains daily.

Anemia to a rather alarming degree requiring transfusion, intravenous fluid, and supportive treatment was seen in one case. However, the response of the hematopoietic system even here appeared to us surprisingly gratifying. Long,¹⁹ in a personal communication, stated that he had observed approximately a dozen cases of hemolytic anemia and two cases of agranulocytosis following the use of sulfanilamide. All recovered although in one of the anemias the hemolysis was so acute that the renal tubules became occluded and a subsequent renal insufficiency developed for a time. Further, he felt that the occasional cases in which severe blood changes developed were unpredictable. While in our modest series no permanent untoward results have presented, nevertheless, certain authors, specifically Frost²¹ and Borst¹ reported deaths from the use of this drug.

In considering the beneficial results of the drug we have been extremely encouraged and have felt that it has become our strongest form of attack against organisms invading the uro-genital tract. Walther²⁵ states, "The final verdict is given not in the laboratory but from the knowledge gained in experience at the bedside."

Pyelitis

The results obtained in its use in pyelitis are as shown in Table II.

TABLE II

Female	44
Male	7
Acute	23
Chronic	28
Complications:	
Hydronephrosis	6
Renal Ptosis	1
Culturally Negative	26
Symptomatic Improvement	21
No Benefit	4

In this group of cases the offending organisms were almost equally divided between staphylococci and members of the colon group with few streptococci infections. The results obtained were apparently equally beneficial in all types of infection except streptococcus faecalis. Helmholz¹⁵ in his observations apparently felt that the drug is more efficacious than mandelic acid in all forms of urinary tract infection, both upper and lower, save in the case of the streptococcus faecalis. In seventeen of these cases of pyelitis in the female there was a definite associated cicatricial urethritis which was treated concomitantly by urethral dilations.

Postoperative Infections

Of twenty postoperative cases (renal, bladder, or prostatic) with residual infection to whom the drug was administered, the infection was eradicated in eight, the patient entirely symptomatically relieved in eight, while in four there was no apparent benefit.

Non-specific Prostatitis and Urethritis

Success rewarded our efforts to a far greater extent in these cases of prostatitis which were treated by massage and irrigations in conjunction with sulfanilamide therapy than we had ever before attained. The symptomatic relief was spectacular and the diminution of the white count in the prostatic fluid usually occurred with surprising rapidity. However, Clark⁴ found that when the drug had been discontinued infection not infrequently again became manifest in the prostate.

In those cases noted as symptomatically relieved there was definite improvement microscopically though not completely to normal in the character of the fluid when

last seen. In the cases of urethral stricture all had associated urethral discharge. It is scarcely necessary to state that urethral dilations were carried out, sulfanilamide being administered in conjunction. The results were uniformly satisfactory.

TABLE III. NON-SPECIFIC LOWER TRACT INFECTIONS IN THE MALE

Prostatitis:	
Clinically Cured	16
Symptomatically Improved	6
No Results	3
Total	25
Urethral Stricture with Urethritis:	
Clinically Cured	5
Symptomatically Relieved	2
Total	7

Gonorrhea

Without doubt sulfanilamide has gained its exalted reputation both among the laity and the physicians of the country because of its reported amazing benefit in the treatment of gonorrhea. Prior to its introduction certainly no drug given by mouth deleteriously affected the growth of this organism to any appreciable degree. The exact method of its bactericidal action is as yet apparently not clearly understood, but, to quote Pittman,²³ "It possesses some peculiar characteristic which enables it to succeed where other methods fail." In view of the fact that previous therapy given either intravenously or by mouth rarely influenced the course of gonorrheic infection we must wonder as to how or why this drug should succeed where others have failed. This point may undoubtedly be explained from the fact that R. D. Herrold^{16,17} has demonstrated its presence in the prostatic fluid, in the washings of the urethra, as well as in the urine, which observation has been substantiated by Helmholz¹⁵ and Buchtel⁷ with relation to prostatic fluid.

To us the publication of the paper by Colston and Dees⁸ seemed at least premature and after careful perusal of their article we were unable to discover that they had applied any of the standard criteria of cure in reporting the results of the nineteen cases treated. If provocative efforts were made they were not mentioned so that true eradication of the infection would seem to have remained unproven. In evaluating the series of cases which have come under our observation we should like to mention the

steps taken in our predication of cure. With the cessation of all clinical and symptomatic manifestations the anterior urethra has been sounded and reaction sought. If unable to obtain reaction the sound has subsequently been passed to the posterior urethra. Again failing reaction, the patient has been given alcohol in the form of beer under direct supervision in our office in order that we may be assured that excess is not ingested and uncontrolled reaction occur. Lastly, instillation of one per cent silver nitrate is made. To date if all of these measures and precautions have been taken and have failed to erupt the gonococcus, we have not encountered what we have felt was a subsequent recurrence of infection. We have chosen Wishengrad's²⁶ interpretation of the time elapsed to accomplish such cure. In other words, the patient may be said to have been cured when the first provocative measure has been negative, providing subsequent provocative measures have not caused exacerbation. With this in mind we present the following series of cases. There were ninety-nine cases of gonorrhea, eighty-five male and fourteen female. The results of treatment were then classified as follows: Cured, fifty-five; symptomatically improved, seventeen; no benefit, seven; lost, six. The duration of infection with and without sulfanilamide may be seen in Table IV.

TABLE IV. FIFTY CASES OF GONORRHEA TREATED PREVIOUS TO SULFANILAMIDE

<i>Duration</i>	<i>Days</i>
Average	104
Shortest	31
Longest	323 plus 5 months
<i>Duration of Infection with Gonorrhea in the Male Treated by Sulfanilamide</i>	
<i>Duration (Acute)</i>	<i>Days</i>
Average	21
Shortest	6
Longest	39
<i>(Chronic)</i>	
Average	45
Shortest	6
Longest	136

It has been impressed upon us in a review of fifty cases of gonorrhea prior to the advent of sulfanilamide that a larger percentage of cases have stayed under medical supervision than previously, undoubtedly due to a very material diminution in the period of treatment necessary. Upon review of our own cases both before and after the introduction of this drug the incidence of lost cases was at least six to one before, and

after its use we find that the percentage of cases cured to our satisfaction and carried through to discharge has increased in approximately the same ratio, which has been in fact both enlightening and encouraging. The average duration of infection in acute gonorrhea was found to be twenty-one days. Turner²⁴ also felt that the majority of his cases were cured in the third week. That of chronic cases was forty-five days. Complications were minimal in both instances and were markedly reduced in frequency. In early cases the incidence of invasion of the posterior urethra was very definitely diminished.

From these observations, namely, the average duration of infection with gonorrhea prior to the use of sulfanilamide and subsequent to its use, one cannot help but reach the conclusion that the drug has been of inestimable assistance from every viewpoint when tolerated. We were further interested in a comparison of the use of the drug with and without supportive treatment and demonstrated to our own complete satisfaction that concomitant therapy further minimizes the duration of the infection and is of material assistance in the eradication of the disease.

Treatment by urethral instillation in our office has been that of acriflavine and gelatin and occasionally self-instillation by the patient of acriflavine 1:4000 or protargol one-quarter of one per cent. A study of Table V will support our contention.

TABLE V. AVERAGE DURATION OF INFECTION IN CASES TREATED WITH SULFANILAMIDE ALONE AND WITH CONCOMITANT THERAPY

Sulfanilamide Only	65 days +
Includes cases lost, duration unknown.	
Sulfanilamide Combined:	
Chronic	45 days
Acute	21 days

We should like to emphasize that the duration of infection has been determined to the best of our ability by careful provocative procedures and that in many of our patients symptomatic relief has occurred in as short a period as twenty-four hours, very particularly in acute cases when the discharge has entirely disappeared within twenty-four hours never to return. We have not felt, however, that the goal has been attained with the disappearance of the discharge, particularly in view of the fact

that with cessation of the drug all clinical manifestations have only too frequently recurred and in several instances in which the patient felt that cure had been accomplished other members of the family have become infected.

While not exactly pertinent but nevertheless of considerable interest to us, we reviewed such cases as had been under treatment in our hands for previous infection and should like to present illustrative cases.

Lastly, the duration of the disease in the same infection is shown prior to the advent of sulfanilamide and following its administration.

TABLE VI. COMPARATIVE RESULTS IN THE SAME PATIENT IN SEPARATE INFECTIONS

Patient	Without Sulfanilamide	With Sulfanilamide
HB.	31 days	6 days
J.V.	117 days	37 days
B.M.	68 days	14 days
B.K.	210 days	14 days

Cases of Chronic Gonorrhea Prior to and After Administration of Sulfanilamide

Without Sulfanilamide	With Sulfanilamide
1. 136 days	Cured in 15 days
2. 115 days	Cured in 13 days
3. 42 days	Cured in 58 days

The average total dosage used in acute gonorrhea was 450 grains. The average total dosage in chronic gonorrhea with supportive treatment was 820 grains. The average used in chronic gonorrhea without other treatment was 1,445 grains. Thus, by the amount of the drug necessary it would further appear that supportive treatment was definitely beneficial.

Conclusions

1. We have determined to our satisfaction that sulfanilamide is of very material help and assistance in the eradication of the infection of the urinary tract.

2. That more than fifty per cent of patients receiving this drug will experience some degree of reaction which may not be prophesied and that a small group may develop extreme reactions.

3. It has contributed more to the favorable outcome of gonorrhea than any form of treatment previously advocated.

4. Many more patients remain under treatment until cured than formerly.

5. Because of the above fact it is a remarkable advance in the attempt at eradication of gonorrhea.

6. The treatment of gonorrhea is more efficacious with supportive urethral and other standard therapy than without.

Since the presentation of this paper, Oct. 23, 1937, the authors have observed an additional one hundred cases which have served to substantiate conclusions drawn, save that doses of 80 grains daily have been discontinued almost entirely in favor of a maximum dose of 60 grains daily with resulting diminution of reactions.

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McDowell, Guy Marshall.....Howell
McEwan, J. H.....Bay City
Medvesky, M. J.....Bay City
Miller, Edwin C.....Bay City
Miller, Maurice C.....Auburn
Mitton, O. W.....East Tawas

Moore, George W.....Bay City
Moore, Neal R.....Bay City
Mosier, D. J.....Bay City
Perkins, Roy C.....Bay City
Pearson, Stanley M.....Bay City
Reutter, C. W.....Bay City
Scrafford, Royston E.....Bay City
Sherman, R. N.....Bay City
Slattery, M. R.....Bay City
Speckhard, A. O.....Bay City
Stinson, W. S.....Bay City
Swantek, Charles M.....Bay City
Sweet, Irving.....Sterling
Tarter, Clyde S.....Bay City
Thiehoff, E. V.....Gladwin
Tupper, Virgil L.....Bay City
Urmston, Paul R.....Bay City
Warren, E. C.....Bay City
Weed, John.....Tawas City
Westman, R.....Bay City
Wilcox, J. W.....Bay City
Wilson, Thomas G.....Bay City
Wittwer, E. A.....Bay City
Ziliak, A. L.....Bay City

Berrien County

Allen, Robert C.....St. Joseph
Barkman, F. J.....St. Joseph
Bartlett, W. M.....Benton Harbor
Bliesmer, A. F.....St. Joseph
Brown, F. W.....Watervliet
Cawthorne, H. J.....Benton Harbor
Colef, Irving.....Benton Harbor
Conybeare, R. C.....Benton Harbor
Dunnington, R. N.....Benton Harbor
Eidson, Hazel.....Berrien Springs
Ellet, W. C.....Benton Harbor
Emery, Clayton.....St. Joseph
Fredrickson, H. C.....Buchanan
Friedman, Morris.....New Buffalo
Gillette, Clarence H.....Niles
Gunn, J. W.....Watervliet
Hanna, P. G.....St. Joseph

Harper, Ina.....Benton Harbor
Harrison, L. L.....Niles
Helkie, Wm. L.....Three Oaks
Hershey, Noel J.....Niles
Higbee, Frank O.....Three Oaks
Herring, Nathaniel A.....Niles
Ingleright, Leon R.....Niles
King, Frank, Jr.....Benton Harbor
King, Frank A., Sr.....Benton Harbor
Kling, H. C.....Niles
Kok, Harry.....Benton Harbor
Kotler, M. J.....Coloma
Lapin, Morley.....Benton Harbor
McDermott, J. J.....St. Joseph
Merritt, Charles W.....St. Joseph
Miller, E. A.....Berrien Springs
Mitchell, Carl A.....Benton Harbor

Moody, Harold.....St. Joseph
Moore, T. Scott.....Niles
Reagan, Robert E.....Benton Harbor
Richmond, D. M.....St. Joseph
Robson, Verna.....Berrien Springs
Silverstein, Joseph S.....Benton Harbor
Smith, W. A.....Berrien Springs
Sowers, B. F.....Benton Harbor
Strayer, J. C.....Buchanan
Taber, R. B.....Benton Harbor
Vary, Edwin P.....Niles
Weil, Leonard.....Benton Harbor
Westervelt, H. O.....Benton Harbor
Witt, Edw. J. (Retired).....Los Angeles, Calif.
Yeomans, T. G.....St. Joseph

Branch County

Aldrich, Napier S.....Coldwater
Beck, Perry C.....Bronson
Bien, W. J.....Coldwater
Brunson, A. E.....Colon
Culver, Bert W.....Coldwater
Danley, W. E.....Union City
Far, S. E.....Quincy

Fraser, R. J.....Bronson
Gist, L. I.....Coldwater
Holbrook, A. G.....Coldwater
Leeder, F. S.....Coldwater
McLain, R. W.....Jackson
Meier, H. J.....Coldwater
Mooi, H. R.....Coldwater

Olmsted, Kenneth L.....Coldwater
Phillips, F. L.....Bronson
Schultz, Samuel.....Coldwater
Scovill, H. A.....Union City
Thomas, J. A.....Coldwater
Wade, R. L.....Coldwater
Weidner, H. R.....Coldwater

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Calhoun County

Allen, Herbert R.....Battle Creek
Amos, Norman H.....Battle Creek
Baribeau, R. H.....Battle Creek
Barnhart, Samuel E.....Battle Creek
Becker, H. F.....Battle Creek
Beuker, Herman.....Marshall
Black, Paul A. L.....Wilmington, N. C.
Bonifer, Philip.....Battle Creek
Brainard, C. W.....Battle Creek
Byland, N. O.....Battle Creek
Campbell, Alice.....Albion
Campbell, R. J.....Battle Creek
Capron, Manley J.....Battle Creek
Church, Starr K.....Marshall
Chynoweth, W. R.....Battle Creek
Cooper, J. E.....Battle Creek
Curry, Robert K.....Homer
Derickson, E. C.....Burlington
Dickson, A. R.....Battle Creek
Dodge, Warren M., Jr.....Battle Creek
Dugan, Wm. M.....Battle Creek
Fahndrich, C. G.....Battle Creek
Finch, D. L.....Augusta
Fopeano, John V.....Battle Creek
Fraser, R. H.....Battle Creek
Funk, L. D.....Athens
Gething, Joseph V.....Battle Creek
Giddings, A. M.....Battle Creek
Gillfillan, Margery J.....Battle Creek
Godfrey, W. L. (Honorary).....Battle Creek
Gordon, J. K. M.....Battle Creek
Gorsline, Clarence S.....Battle Creek
Hafford, A. T.....Albion
Hafford, George C.....Albion
Hansen, E. L.....Battle Creek
Harris, Rowland H.....Battle Creek
Haughey, Wilfrid.....Battle Creek

Haughey, Wm. H. (Honorary).....Battle Creek
Heald, C. W.....Battle Creek
Henderson, Louis M.....Albion
Henderson, Phillip.....Albion
Herzer, Henry A.....Albion
Hills, C. R.....Battle Creek
Holes, Jesse J.....Battle Creek
Holton, B. G.....Battle Creek
Howard, W. L.....Battle Creek
Hoyt, Aura A.....Battle Creek
Humphrey, Archie E.....Marshall
Humphrey, Arthur A.....Battle Creek
Jespersion, Lydia.....Battle Creek
Johnson, O. J.....Marshall
Jones, T. K.....Marshall
Keagle, Leland R.....Battle Creek
Keeler, K. B.....Albion
Kellogg, Carrie S.....Battle Creek
Kellogg, John H.....Battle Creek
Kingsley, Paul C.....Battle Creek
Kinde, M. R.....Battle Creek
Kinzel, R. W.....Battle Creek
Kolvoord, Theodore.....Battle Creek
LaFrance, Francis.....Battle Creek
Landon, Charles C.....Battle Creek
Lanman, Everett L.....Battle Creek
Lewis, W. B.....Battle Creek
Lowe, H. M.....Battle Creek
Lowe, Kenneth.....Battle Creek
Lowe, Stanley T.....Battle Creek
MacGregor, Archibald.....Battle Creek
Martin, Walter F.....Battle Creek
McNair, Lawrence.....Albion
Melges, F. J.....Battle Creek
Mercer, C. M.....Battle Creek
Morrison, Donald B.....Tekonsha
Mortensen, Martin A.....Santa Clara, Calif.

Moshier, Bertha.....Battle Creek
Mustard, Russell.....Battle Creek
Nelson, Albert W.....Battle Creek
Olsen, A. B.....Battle Creek
Overholt, B. M.....Battle Creek
Patterson, A.....Battle Creek
Pritchard, J. Stuart.....Battle Creek
Putman, W. N.....Battle Creek
Radabaugh, Clara V.....Battle Creek
Riley, Wm. H.....Battle Creek
Robbert, John.....Climax
Rorick, Wilma W.....Battle Creek
Rosenfeld, Jos. E.....Battle Creek
Roth, Paul.....Battle Creek
Royer, C. W.....Battle Creek
Royer, W. A.....Battle Creek
Selmon, Bertha L.....Battle Creek
Sharp, A. D.....Albion
Shipp, L. P.....Battle Creek
Simpson, R. S.....Battle Creek
Slagle, Geo. W.....Battle Creek
Sleight, James D.....Battle Creek
Sleight, Raymond D.....Battle Creek
Smith, T. C.....Athens
Stadle, Wendell H.....Battle Creek
Stewart, Charles E.....Battle Creek
Stiefel, Richard A.....Battle Creek
Tannenholz, Harold S.....Battle Creek
Taylor, Clifford B.....Albion
Upson, W. O.....Battle Creek
Van Camp, Elijah.....Battle Creek
Vander Voort, W. V.....Battle Creek
Verity, Lloyd E.....Battle Creek
Vollmer, Maud J.....Moline, Ill.
Walters, F. R.....Battle Creek
Wencke, Carl G.....Battle Creek
Whyte, Bruce.....Battle Creek
Winslow, R. C.....Battle Creek

Cass County

Adams, U. M.....Marcellus
Bryant, S. E.....Dowagiac
Clary, R. I.....Dowagiac
Cunningham, E. M.....Cassopolis
Harmon, C. M.....Cassopolis

Hickman, John.....Dowagiac
Jones, John H.....Dowagiac
Kelsey, James H.....Cassopolis
Loupee, George.....Dowagiac
Loupee, S. L.....Dowagiac

Lyman, W. R.....Dowagiac
Myers, Charles M.....Dowagiac
Newsome, Otis.....Cassopolis
Pierce, Kenneth C.....Dowagiac
Zwergel, E. H.....Cassopolis

Chippewa-Mackinac Counties

Bandy, F. C.....Sault Ste. Marie
Birch, Wm.....Sault Ste. Marie
Blain, James G.....Sault Ste. Marie
Conrad, George A.....Sault Ste. Marie
Cornell, Eliphalet A. (Honorary).....Sault Ste. Marie
Darby, J. F.....St. Ignace
Edmison, W. C.....St. Ignace

Ennis, C. J. (Honorary).....Sault Ste. Marie
Gillfillan, E. O.....Sault Ste. Marie
Husband, F. H.....Sault Ste. Marie
Littlejohn, David.....Sault Ste. Marie
McBryde, Lyman M.....Sault Ste. Marie
Mertaugh, W. F.....Sault Ste. Marie
Moloney, F. J.....Sault Ste. Marie

Montgomery, B. T.....St. Ignace
Reese, J. A.....DeTour
Scott, Dwight F.....Sault Ste. Marie
Vegors, S. H.....Sault Ste. Marie
Wallen, LeRoy J.....Sault Ste. Marie
Webster, E. H.....Sault Ste. Marie
Willison, C.....Sault Ste. Marie
Yale, I. V.....Sault Ste. Marie

Clinton County

Foo, Charles T.....St. Johns
Frace, Guy H.....St. Johns
Hart, Dean W.....St. Johns
Henthorn, A. C.....St. Johns

Ho, Thomas Y.....St. Johns
Luton, F. E.....St. Johns
MacPherson, D. H.....Fowler

McWilliams, W. B.....Maple Rapids
Richards, F. D.....De Witt
Russell, Sherwood R.....St. Johns

Delta County

Bachus, Arthur.....Bark River
Bartley, George C.....Escanaba
Benson, G. W.....Escanaba
Boyce, D. H.....Escanaba
Carlton, A. J.....Escanaba
Chenoweth, Nancy R.....Escanaba
Defnet, Harry J.....Escanaba
Diamond, F. J.....Gladstone

Diamond, J. A.....Gladstone
Frenn, Nathan J.....Bark River
Groos, Harold O.....Escanaba
Groos, Louis P.....Escanaba
Hult, Otto S.....Gladstone
Kitchen, A. S.....Escanaba
Lanting, R.....Escanaba
Lemire, Wm. A.....Escanaba

Long, Harry W.....Escanaba
Miller, Albert H.....Gladstone
Mitchell, James D.....Gladstone
Moll, G. W.....Escanaba
Treiber, Louis P.....Escanaba
Walsh, J. J.....Escanaba
Witters, Josef E.....Nahma

Dickinson-Iron Counties

Alexander, W. H.....Iron Mountain
Anderson, E. B.....Iron Mountain
Baron, B. C.....Crystal Falls
Boyce, George H.....Iron Mountain
Browning, James L.....Iron Mountain
Camper, T. E.....Stambaugh
Crowell, Joseph A.....Iron Mountain
De Salvo, F.....Niagara, Wis.

Fiedling, Wm.....Norway
Frederickson, G. A.....Iron Mountain
Haight, H. H.....Crystal Falls
Hamlin, Lloyd E.....Norway
Hayes, R. E.....Sagola
Huron, W. H.....Iron Mountain
Irvine, L. E.....Iron River
Kofmehl, Wm. J.....Stambaugh

Larson, H. J.....Crystal Falls
Levine, D. A.....Iron River
Libby, Edward M.....Iron River
Menzies, Clifford.....Iron Mountain
Merritt, C. E.....Iron Mountain
Smith, Donald R.....Iron Mountain
Walker, Claude W.....Iron Mountain
White, Robert E.....Stambaugh

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Eaton County

Anderson, K. A.....Charlotte
Arner, Fred L.....Bellevue
Bradley, James B.....Eaton Rapids
Brown, B. Phillip.....Charlotte
Burdick, Austin F.....Grand Ledge
Burleson, A. H. (Honorary).....Olivet
Engle, Paul.....Olivet
Gibson, T. E.....Charlotte
Hargrave, Don V.....Eaton Rapids
Huber, Charles D.....Charlotte

Imthun, Edgar F.....Grand Ledge
Lawther, John.....Charlotte
Lown, C. A.....Grand Ledge
McLaughlin, C. L. D.....Vermontville
Moyer, H. A.....Charlotte
Myers, Albert W.....Pottersville
Paine, E. M., Sr.....Grand Ledge
Paine, E. Madison, Jr.....Grand Ledge
Quick, Phil H.....Olivet
Rickerd, Vinton J.....Charlotte

Sackett, C. S.....Charlotte
Sassaman, F. W.....Charlotte
Sevener, C. J.....Charlotte
Sevener, Lester G.....Charlotte
Sheets, A. G.....Eaton Rapids
Stanka, Andrew G.....Grand Ledge
Stimson, C. A.....Eaton Rapids
Van Ark, Bert.....Eaton Rapids
Wilensky, Thomas.....Eaton Rapids

Genesee County

Backus, G. R.....Flint
Bahlman, Gordon H.....Flint
Baird, James.....Flint
Bald, Fred W.....Flint
Baske, Franklin W.....Flint
Batemans, L. G.....Flint
Benson, J. C.....Flint
Biggar, H. R.....Flint
Bishop, D. L.....Flint
Blakeley, A. C.....Flint
Bogart, Leon M.....Flint
Boles, Wm. P.....Flint
Bonathan, A. T.....Flint
Bradley, Robert.....Flint
Brain, R. Gordon.....Flint
Brasie, D. R.....Flint
Briggs, Guy D.....Flint
Burnell, B. E.....Flint
Burnell, Max.....Flint
Chambers, Myrton S.....Flint
Charters, John H.....Flushing
Childs, Lloyd H.....Flint
Clark, Clifford P.....Flint
Colwell, C. W.....Flint
Connell, J. T.....Flint
Conover, G. V.....Flint
Conover, T. S.....Flint
Cook, Henry.....Flint
Cort, F. L.....Gaines
Credille, B. A.....Flint
Curry, George.....Flint
Curtin, J. H.....Flint
Dimond, E. G.....Flint
Dodds, F. E.....Flint
Drewyer, Glen.....Flint
Edgerton, A. C.....Clio
Finkelstein, T.....Flint
Flynn, S. T.....Flint
Foley, S. I.....Flint
Fuller, H. T.....Mt. Morris
Gelenger, S. M.....Flint

Gleason, N. Arthur.....Flint
Goering, Geo. R.....Flint
Golden, H. Maxwell.....Flint
Goodfellow, B. J.....Flint
Gorne, S. S.....Flint
Graham, H.....Mt. Morris
Guile, Earle.....Flint
Guile, G. S.....Flint
Gundry, G. L.....Grand Blanc
Hague, R. F.....Flint
Halligan, Raymond S.....Flint
Handy, John W.....Flint
Harper, A. W.....Flint
Harper, Homer.....Flint
Hawkins, James E.....Flint
Hiscock, H. H.....Flint
Houston, James.....Swartz Creek
Hubbard, Wm. B.....Flint
Johnson, F.....Flint
Kirk, A. Dale.....Flint
Kretschmar, A. H.....Flint
Lavin, Kathryn R.....Flint
Logan, G. W.....Flushing
MacDuff, R. B.....Flint
MacGregor, D. M.....Flint
MacGregor, R. W.....Flint
Macksood, Joseph.....Flint
Malfrid, B. W.....Flint
Marsh, H.....Flint
Marshall, Wm. H.....Flint
Mason, Elta.....Flint
Matthewson, Guy C.....Flint
McArthur, A.....Flint
McGarry, Burton G.....Fenton
McGarry, R. A.....Fenton
McGregor, James C.....Flint
McKenna, O. W.....Flint
Miner, F. B.....Flint
Morrish, Ray S.....Flint
Morrissey, V. H.....Flint
Mosier, Edward C.....Otsville

Odle, Ira.....Flint
Orr, J. Walter.....Flint
Paul, A. T.....Flint
Pfeiffer, A. C.....Mt. Morris
Phillips, R. L.....Flint
Pratz, O. C.....Flint
Preston, Otto.....Flint
Randall, H. E.....Flint
Reeder, Frank E.....Flint
Reid, Wells C.....Goodrich
Richeson, V.....Flint
Roberts, Floyd A.....Flint
Rowley, James A.....Flint
Rundles, Walter Z.....Flint
Scavarda, Charles J.....Flint
Scott, R. D.....Flint
Shantz, L. O.....Flint
Sleeman, Blythe.....Linden
Smith, E. C.....Flint
Sniderman, Benjamin.....Flint
Sorkin, S. S.....Flint
Steinman, F. H.....Flint
Stephenson, Robert A.....Flint
Stevenson, W. W.....Flint
Stroup, C. K.....Flint
Sutherland, James K.....Flint
Sutton, M. R.....Flint
Thompson, Alvin.....Flint
Walden, C. E.....Flint
Wall, W. J.....Davison
Wallace, Wm. S.....Flint
Wark, D. R.....Flint
Wheelock, A. S.....Flint
White, C. H.....Fenton
White, Herbert.....Flint
Williams, W. S.....Flint
Willoughby, G. L.....Flint
Willoughby, L. L.....Flint
Wills, T. N.....Flint
Wright, D. R.....Flint
Wright, G. R.....Montrose
Wyman, J. S.....Davison

Gogebic County

Anderson, Charles E.....Bessemer
Byrd, Wallace.....Watersmeet
Conley, W. C.....Ironwood
Crosby, Theodore S.....Ironwood
Eisele, D. C.....Ironwood
Gertz, M. A.....Ironwood
Gorrilla, A. C.....Ironwood
Lieberthal, M. J.....Ironwood
Lieberthal, Paul.....Ironwood

Maloney, F. G. H.....Ironwood
Nezworski, H. T.....Ramsay
O'Brien, A. J.....Ironwood
Pierpont, D. C.....Ironwood
Pinkerton, H. A.....Ironwood
Pinkerton, W. J.....Bessemer
Prout, Robert L. C.....Wakefield
Rees, Thomas R.....Ironwood
Reid, John D.....Ironwood

Reynolds, F. L. S.....Ironwood
Sarvela, H. L.....Ironwood
Stevens, Charles E.....Bessemer
Tew, Wm. Ellwood.....Bessemer
Tressel, H. A.....Wakefield
Urquhart, C. C.....Ironwood
Wacek, W. H.....Ironwood
Winter, Joseph A.....Ironwood

Grand Traverse-Leelanau-Benzie Counties

Brownson, J. J.....Kingsley
Bushong, B. B.....Traverse City
Covey, E. L.....Honor
Ellis, Claude L.....Suttons Bay
Flood, Robert E.....Northport
Gauntlett, J. W.....Traverse City
Holliday, George A.....Traverse City
Huston, Russell R.....Elk Rapids
Jones, Stewart R.....Suttons Bay
Kitson, V. H.....Elk Rapids
Kyselka, H. B.....Traverse City

Lemen, Charles E.....Traverse City
Lossman, R. T.....Traverse City
Murphy, Fred E.....Cedar
Nickels, M. M.....Traverse City
Osterlin, Mark.....Traverse City
Porter, Clark.....Traverse City
Quinn, Henry M.....Copenish
Rennell, E. J.....Traverse City
Sheets, R. Philip.....Traverse City
Sladek, E. F.....Traverse City

Smiseth, Selmer P.....Suttons Bay
Stone, Fordyce H.....Beulah
Swartz, F. G.....Traverse City
Thacker, Fred R.....Frankfort
Thirlby, E. L.....Traverse City
Thompson, T. W.....Traverse City
Trautman, Frederick D.....Frankfort
Way, Lewis R.....Traverse City
Zielke, I. H.....Traverse City
Zimmerman, J. G.....Traverse City

Gratiot-Isabella-Clare Counties

Aldrich, Alfred L.....Ithaca
Barstow, D. K.....St. Louis
Barstow, W. E.....St. Louis
Baskerville, C. M.....Mt. Pleasant
Becker, M. G.....Edmore
Budge, M. J.....Ithaca
Burch, L. J.....Mt. Pleasant
Burt, C. E.....Ithaca
Carney, T. J.....Alma
Davis, L. L.....Mt. Pleasant
Dawson, R. E.....Blanchard
Drake, Wilkie M.....Breckenridge
DuBois, C. F.....Alma

Duffy, Ray M.....Breckenridge
Faber, Michael.....Ashley
Graham, B. J.....Alma
Graham, F. J.....Alma
Hall, B. C.....Pompeii
Hammerberg, Kuno.....Clare
Harrigan, W. L.....Mt. Pleasant
Hersee, Wm. E.....Mt. Pleasant
Hobbs, A. D.....St. Louis
Howell, Don M.....Alma
Hubbard, M. C.....Vestaburg
Johnson, P. R.....Mt. Pleasant
Kilborn, H. F.....Ithaca

Lamb, E. T.....Alma
McArthur, Stewart C.....Mt. Pleasant
Reeder, J. A.....Clare
Rondot, E. F.....Lake
Sanford, B. J.....Clare
Sarven, J. D.....Middleton
Slattery, F. G.....Clare
Strange, Russell H.....Mt. Pleasant
Waggoner, R. L.....St. Louis
Wilcox, R. A.....Alma
Wilson, Earl C.....Harrison
Wolfe, Kenneth P.....Alma
Wood, Cornelius B.....Clare

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Hillsdale County

Alleger, W. E.Pittsford
Bates, James A.Camden
Bower, Charles T.Hillsdale
Bowers, M. H.Hillsdale
Clobridge, G. E.Allen
Day, Luther W.Jonesville
Ditmars, William H.Jonesville
Fisk, F. B.Jonesville

Green, B. F.Hillsdale
Hamilton, A. J.Hillsdale
Hanke, George R.Ransom
Heald, J. E.Hillsdale
Hodge, C. L.Reading
Hughes, Henry F.Hillsdale
Johnson, James H.Hillsdale
Kline, FredLitchfield
Mattson, H. F.Hillsdale

Martindale, E. A.Hillsdale
McFarland, O. G.North Adams
McGavran, E. G.Hillsdale
Miller, Harry C.Hillsdale
Poppen, C. J.Reading
Sterling, John S.Jerome
Strom, A. W.Hillsdale
Yeagley, J. L.Waldron

Houghton-Baraga-Keweenaw Counties

Abrams, James C.Calumet
Aldrich, A. B.Houghton
Aldrich, Addison D.Houghton
Bourland, Philip D.Calumet
Brewington, Geo. F.Mohawk
Buckland, R. S.Baraga
Burke, JohnHubbell
Coffin, Leslie E.Painesdale
Cooper, C. A.Hancock
Gregg, W. T. S.Calumet
Hilmer, R. E.Beacon Hill
Janis, A. J.Hancock
Kadin, MauriceCalumet

King, William T.Ahmeek
Kirtan, Joseph R. W.Calumet
LaBine, AlfredHoughton
Levin, SimonHoughton
Leo, L. S.Houghton
Maas, R. J. (Emeritus)Houghton
MacQueen, Donald K.Laurium
Manthei, W. A.Lake Linden
Marshall, Frank F.L'Anse
Quick, James B.Laurium
Roberts, Melvin D.Hancock
Roche, A. C.Calumet
Rupprecht, C. H.Calumet

Scott, Wm. P. (Emeritus) ..Houghton
Sloan, P. S.Trimountain
Stern, Isadore D.Houghton
Stewart, G. C.Hancock
Stewart, J. C. B.Painesdale
Stewart, MarshallHoughton
Tinetti, Ernest F.Laurium
Van Slyke, Wm. H.Hancock
Waldie, Geo. Mc. L.Hancock
Ware, H. M.Ahmeek
Wickliffe, T. P.Calumet
Winkler, Henry J.L'Anse

Huron-Sanilac Counties

Blanchard, E. W.Deckerville
Caccamise, Jos. G.Sebewaing
Cochran, Lewis E.Peck
Gettel, Roy R.Kinde
Gaston, LloydSandusky
Gift, W. A.Marlette
Hart, R. K.Croswell
Henderson, J. Bates.Pigeon

Herrington, Charles I.Bad Axe
Herrington, Willet J.Bad Axe
Holdship, William B.Uby
Kirker, F. O.Sandusky
Koch, D.Brown City
Learmont, H. H.Croswell
Lunn, J. O.Harbor Beach
Monroe, Duncan J.Elkton
Morden, Charles B.Bad Axe

Norgaard, Hal V.Marlette
Oakes, C. W.Harbor Beach
Robertson, Collin G.Sandusky
Scheurer, C.Pigeon
Thumme, Harrison F.Sebewaing
Tweedie, G. Evans.Sandusky
Tweedie, S. Martin.Sandusky
Webster, John C.Marlette

Ingham County

Albers, J. S.East Lansing
Barnum, S. V.Lansing
Barrett, C. D.Mason
Bartholomew, Henry S.Lansing
Bauer, Theodore I.Lansing
Behen, William C.Lansing
Bellinger, E. G.Lansing
Bolin, R. S.Mason
Bradford, C. W.Lansing
Breakey, Robert S.Lansing
Brubaker, EarlLansing
Brucker, Karl B.Lansing
Bruegel, Oscar H.East Lansing
Burhans, RobertLansing
Cameron, W. J.Lansing
Campbell, A. M.Lansing
Carr, Earl I.Lansing
Christian, L. G.Lansing
Cook, R. J.Lansing
Corsaut, J. C.Mason
Culver, C. F.Howell
Cushman, F. J.Lansing
Darling, L. H.Lansing
Davenport, C. S.Lansing
DeVries, C. F.Lansing
Doyle, Charles R.Lansing
Doyle, C. P.Lansing
Drolett, Fred J.Lansing
Drolett, Lawrence.Lansing
Dunn, F. C.Lansing
Dunn, F. M.Lansing
Ellis, Bertha.Lansing
Ellis, C. W.Lansing
Finch, Russell L.Lansing
Fisher, D. W.Lansing
Fosget, Wilbur W.Lansing
Foust, E. H.Lansing
Freeland, O. H.Mason
French, Horace L.Lansing
Galbraith, Dugald A.Lansing
Gardner, C. B.Lansing
Goldner, R. E.Lansing
Gudakunst, Don W.Lansing
Gunderson, G. O.Lansing
Guy, Spender D.Lansing

Hall, R. E.Dansville
Hart, L. C.Lansing
Haynes, H. B.Lansing
Haze, Harry A.Lansing
Heckert, FrankLansing
Heckert, J. K.Lansing
Hendren, Owen.Williamston
Henry, L.Lansing
Hermes, Ed. J.Lansing
Himmelberger, R. J.Lansing
Hodges, Kenneth P.Lansing
Huggett, Clare C.Lansing
Huntley, Fred M.Lansing
Hurth, M. S.Lansing
Johnson, K. H.Lansing
Jones, Francis A.Lansing
Kalmbach, R. E.Lansing
Keim, C. D.Lansing
Kent, Edith Hall.Lansing
Kent, Herbert K.Lansing
Krafts, L. C.Leslie
Larabee, E. E.Williamston
Loree, Maurice C.Lansing
Lucas, T. A.Lansing
Ludlum, L. C.Lansing
McConnell, E. G.Lansing
McCorvie, C. Ray.East Lansing
McCoy, Earl M.Grand Ledge
McCrumb, R. R.Lansing
McGillicuddy, Oliver B.Lansing
McGillicuddy, R. J.Lansing
McIntyre, J. E.Lansing
McNamara, Wm. E.Lansing
McPherson, E. G.Stockbridge
Mercer, Walter E.Webberville
Meyer, H. R.Lansing
Miller, H. A.Lansing
Miller, Robert E. (Honorary) ..Lansing
Mitchell, A. B.Lansing
Morrow, R.Lansing
Niles, B. D.Lansing
Ochsner, P. J.Lansing
Olin, Richard M.East Lansing
Osborn, SamuelLansing

O'Sullivan, GertrudeMason
Owen, A. E.Lansing
Peacock, T. L.Lansing
Phillips, R. H.Lansing
Pinkham, R. A.Lansing
Ponton, J.Mason
Prall, H. J.Lansing
Randall, O. M.Lansing
Roberts, D. W.Lansing
Robson, Edmund J.Lansing
Rockwell, H. C.Lansing
Rozan, J. S.Lansing
Rozan, M. M.Lansing
Russell, Claude V.Lansing
Sander, John F.Lansing
Sanford, Thomas M.Lansing
Seger, Fred L.Lansing
Shaw, MiltonLansing
Slemmons, C. C.Grand Rapids
Smith, H. M.Lansing
Smith, Lillian R.Lansing
Snell, Dana M.Lansing
Snyder, LeMoine.Lansing
Spencer, Perry.Lansing
Steiner, A. A.Lansing
Stiles, Frank.Lansing
Strauss, P. C.Lansing
Stucky, George C.Lansing
Toothaker, KennethLansing
Towne, Lawrence C.Lansing
Troost, F. L.Holt
Vander Slice, E. R.Lansing
Vander Zalm, T. P.Lansing
Wadley, RalphLansing
Warford, J. T.Lansing
Webb, Roy O.Okemos
Weinburgh, H. B.Lansing
Welch, William.Lansing
Wetzel, John O.Lansing
Wight, W. G.Lansing
Wiley, Harold W.Lansing
Wellman, John M.Lansing
Willson, Howard S.Lansing
Wilson, Harry A.Lansing

Ionian-Montcalm Counties

Bird, William L.Greenville
Bower, A. J.Greenville
Bracey, FrankSaranac
Bracey, L. E.Sheridan
Dunkin, Lloyd S.Greenville
Duval, L. E.Ionian
Ferguson, F. H.Carson City
Fleming, J. C.Pewamo
Fox, Harold M.Portland
Fuller, Rudolphus W.Crystal
Geib, O. P.Carson City
Hansen, M. M.Greenville

Hargrave, F. A. (Emeritus)Palo
Haskell, Robert H.Northville
Hay, John R.Saranac
Hoffs, M. A.Lake Odessa
Hollard, A. E.Belding
Imus, H. L.Ionian
Johns, Joseph J.Ionian
Kelsey, L. E.Lakeview
Kling, V. F.Ionian
Laughlin, A. I.Clarksville
La Victoire, I. N.Ionian
Lilly, I. S.Stanton
Lintner, Roy C.Ionian

Marsh, F. M.Ionian
Marston, L. L.Lakeview
Maynard, Herbert M.Ionian
McCann, John J.Ionian
Norris, William W.Portland
Peabody, C. H.Lake Odessa
Pankhurst, C. T.Ionian
Pinkham, J. F.Belding
Robertson, P. C.Ionian
Swift, E. R.Lakeview
Van Loo, J. A.Belding
Whitten, R. R.Ionian

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Jackson County

Ahronheim, J. H. Jackson
Alter, R. H. Jackson
Anderson, W. B. Jackson
Baker, G. M. Parma
Balconi, Henry Brooklyn
Bartholic, F. W. Grass Lake
Brown, H. A. Jackson
Bullen, G. R. Jackson
Chabut, H. Jackson
Clarke, C. S. Jackson
Cochrane, Wayne A. Jackson
Cooley, Randall M. Jackson
Corley, C. Jackson
Corley, Ennis Jackson
Cox, Ferdinand Jackson
Crowley, Edw. D. Jackson
Culver, Guy D. Stockbridge
DeMay, C. E. Jackson
Dengler, C. R. Jackson
Edmonds, J. M. Horton
Enders, W. H. Jackson
Finton, Walter L. Jackson
Finton, W. R. Jackson
Foust, W. L. Grass Lake
Gibson, F. J. Jackson
Glover, H. G. Jackson
Greenbaum, Harry Jackson
Hackett, T. E. Jackson
Hanft, Cyril F. Springport
Hanna, R. J. Jackson
Hardie, G. C. Jackson
Harris, Lester J. Jackson

Hicks, Glenn C. Jackson
Hoernschemeyer, J. L. Jackson
Hungerford, P. R. Concord
Huntley, W. B. Jackson
Hurley, H. L. Jackson
Keefer, A. H. Concord
Kudner, Don F. Jackson
Kugler, J. C. (Emeritus) Jackson
Lake, Wm. H. Jackson
Lathrop, Wm. W. Jackson
Leahy, E. O. Jackson
Leonard, Clyde A. Jackson
Lewis, E. F. Jackson
Ludwick, J. E. Jackson
McGarvey, W. E. Jackson
McLaughlin, M. J. Jackson
Meads, J. B. Jackson
Munro, C. D. Jackson
Munro, James E. Jackson
Murphy, B. M. Jackson
Newton, R. E. Jackson
O'Meara, James J. Jackson
Otis, G. R. Jackson
Page, John W. Jackson
Peterson, E. S. Jackson
Philips, David P. Jackson
Porter, H. W. Jackson
Pray, Frank F. Jackson
Pray, George R. Jackson
Quillen, R. D. Chelsea
Ransom, F. G. Jackson
Riley, Philip A. Jackson

Roberts, Arthur J. (Emeritus) Jackson
Schepeler, Cortland W. Brooklyn
Scheurer, P. A. Manchester
Schmidt, T. E. Jackson
Scott, John A. Jackson
Seybold, G. A. Jackson
Shaeffer, A. M. Jackson
Smith, Dean W. Jackson
Smith, John C. Jackson
Snow, W. R. Jackson
Speck, John W. Jackson
Spicer, W. E. Jackson
Stewart, L. L. Jackson
Stewart, Maitland N. Jackson
Stocking, Bruce W. Jackson
Susskind, M. V. Jackson
Tate, Cecil E. Jackson
Thalner, L. F. Jackson
Thayer, E. A. Jackson
Townsend, J. W. Vandercook Lake
Tuthill, F. S. Concord
Van Schoick, J. D. Hanover
Van Schoick, Frank Jackson
Werthenberger, M. D. Jackson
Wholihan, John W. Michigan Center
Wickham, W. A. Jackson
Wilson, E. D. Jackson
Wilson, E. G. Jackson
Wilson, N. D. Jackson
Winter, G. E. Jackson
Woyt, S. W. Jackson

Kalamazoo-Van Buren Counties

Aach, Hugo Kalamazoo
Adams, R. U. Kalamazoo
Alexander, C. A. Kalamazoo
Ames, Edward (Emeritus) Kalamazoo
Andrews, F. T. Kalamazoo
Andrews, Sherman Kalamazoo
Armstrong, R. J. Kalamazoo
Balch, R. E. Kalamazoo
Banner, Lawrence R. Kalamazoo
Barnebee, J. Hosea Kalamazoo
Barnebee, J. W. Kalamazoo
Barrett, F. Elizabeth Kalamazoo
Bennett, Charles L. Kalamazoo
Bennett, Keith Kalamazoo
Berry, J. F. Kalamazoo
Bodmer, H. C. Kalamazoo
Bope, Wm. P. Decatur
Borgman, Wallace Kalamazoo
Boothby, F. M. Lawrence
Boys, C. E. Kalamazoo
Boys, Floyd Kalamazoo
Braden, G. M. (Emeritus) Scotts
Brown, I. W. Kalamazoo
Burns, J. T. Kalamazoo
Caldwell, George H. Kalamazoo
Cobb, Horace R. Kalamazoo
Collins, Ward E. Kalamazoo
Cook, R. G. Kalamazoo
Crawford, Kenneth Kalamazoo
Crum, Leo J. Kalamazoo
Dean, Ray Three Rivers
Den Bleyker, Walter Kalamazoo
DeWitt, L. H. Kalamazoo
Diephus, Bert South Haven
Dowd, B. J. Kalamazoo
Doyle, F. M. Kalamazoo
Ertell, Wm. Francis Kalamazoo
Fast, R. B. Kalamazoo
Fulkerson, C. B. Kalamazoo
Fuller, P. M. Kalamazoo
Fuller, R. T. Kalamazoo
Garrett, Evan Hartford
Gerstner, Louis W. Kalamazoo
Giffen, John R. Bangor
Gilding, Joseph Vicksburg

Gilding, Z. L. Vicksburg
Grant, Frederick E. Kalamazoo
Greenman, Newton H. Decatur
Gregg, Sherman Kalamazoo
Harter, Randolph S. Schoolcraft
Heersma, H. C. Kalamazoo
Hildreth, R. S. Kalamazoo
Hobbs, E. J. Galesburg
Hodgman, Albert Kalamazoo
Hoebeke, Wm. G. Kalamazoo
Howard, W. H. Galesburg
Hubbell, R. J. Kalamazoo
Huyser, Wm. C. Kalamazoo
Ilgenfritz, F. M. Kalamazoo
Irwin, Wm. D. Kalamazoo
Itzen, J. F. South Haven
Jackson, John B. Kalamazoo
Jennings, W. O. Kalamazoo
Kenzie, W. N. Camp Custer
Kingma, J. G. Decatur
Klerk, W. J. Kalamazoo
Koestner, P. A. Kalamazoo
Lambert, R. H. Kalamazoo
Lang, W. W. Kalamazoo
Lavender, Howard Kalamazoo
Light, Richard U. Kalamazoo
Light, S. Rudolph Kalamazoo
Littig, John Kalamazoo
Lowe, Edwin G. Bangor
MacGregor, J. R. Kalamazoo
Malone, James G. Kalamazoo
Maxwell, J. C. Paw Paw
McCarthy, J. S. Kalamazoo
McIntyre, C. H. Kalamazoo
McNabb, A. A. Lawrence
McNair, Rush Kalamazoo
Morter, Roy A. Kalamazoo
Murphy, Norman D. Bangor
Nibbelink, Benjamin Kalamazoo
Osborne, Charles E. Vicksburg
Patmos, Martin Kalamazoo
Peelen, J. W. Kalamazoo
Peelen, Matthew Kalamazoo
Penoyar, C. L. South Haven
Perry, Clifton Kalamazoo

Pratt, F. A. Kalamazoo
Prentice, Hazel R. Kalamazoo
Pullon, A. R. Kalamazoo
Rickert, John A. Allegan
Rigterink, H. A. Kalamazoo
Riley, G. M. Gobles
Rockwell, A. H. (Emeritus) Kalamazoo
Rockwell, Donald C. Kalamazoo
Sage, E. D. Kalamazoo
Scholten, D. J. Kalamazoo
Scholten, Wm. Kalamazoo
Schrier, C. M. Kalamazoo
Schrier, Paul Kalamazoo
Schrier, Thomas Comstock
Scott, Wm. A. Kalamazoo
Sears, H. A. Kalamazoo
Shackleton, Wm. E. Kalamazoo
Shepard, Benjamin A. Kalamazoo
Shook, R. W. Kalamazoo
Snyder, Roscoe F. Kalamazoo
Southworth, M. N. Schoolcraft
Spalding, R. W. Gobles
Squires, David E. Kalamazoo
Stewart, L. H. Kalamazoo
Ten Houten, Chas. Paw Paw
Terwilliger, Edwin South Haven
Unrath, Clara Kalamazoo
Upjohn, E. Gifford Kalamazoo
Upjohn, L. N. Kalamazoo
Van Ness, J. Howard Allegan
Van Urk, Thomas Kalamazoo
Volderauer, John Kalamazoo
Wagar, Carl Schoolcraft
Walker, Burt D. Kalamazoo
Weirich, Richard Marcellus
West, A. E. Kalamazoo
Westcott, L. E. Kalamazoo
Wilbur, E. P. Kalamazoo
Wilkinson, Chester A. Kendall
Williams, F. N. Hartford
Youngs, A. S. Kalamazoo
Youngs, C. A. Kalamazoo
Young, Wm. R. Lawton

Kent County

Adams, F. A. Grand Rapids
Aitken, George T. Grand Rapids
Bachman, G. A. Grand Rapids
Baert, George H. Grand Rapids
Baker, Abel J. Grand Rapids
Ballard, M. S. Grand Rapids
Beel, Horace J. Grand Rapids
Beets, W. Clarence Grand Rapids
Beeman, C. B. Grand Rapids
Beeman, C. E. Grand Rapids
Bettison, Wm. L. Grand Rapids
Billings, Elton P. Grand Rapids
Blackburn, Henry M. Grand Rapids
Bloxsom, P. W. Grand Rapids
Boet, F. A. Grand Rapids
Bond, Geo. L. Grand Rapids

Bosch, L. C. Grand Rapids
Brayman, C. W. Cedar Springs
Brook, Jacob D. Grandville
Brotherhood, J. S. Grand Rapids
Browning, Eugene S. Grand Rapids
Buesing, O. R. Grand Rapids
Bull, Frank L. Sparta
Burling, Wesley M. Grand Rapids
Butler, Wm. J. Grand Rapids
Byers, Earl J. Grand Rapids
Cameron, Don B. Grand Rapids
Campbell, Alexander M. Grand Rapids
Cardwell, John F. Grand Rapids
Chadwick, Ward L. Grand Rapids
Chamberlain, L. H. Grand Rapids
Chandler, Donald Grand Rapids

Cilley, E. O. Grand Rapids
Claytor, R. W. Grand Rapids
Collisi, H. S. Grand Rapids
Colvin, W. G. Grand Rapids
Corbus, Burton R. Grand Rapids
Crane, Charles V. Grand Rapids
Crane, Harold D. Grand Rapids
Currier, Fred P. Grand Rapids
Dales, Ernest W. Grand Rapids
Davis, D. B. Grand Rapids
Dean, Alfred W. Grand Rapids
DeBoer, Guy W. Grand Rapids
Dell, E. E. Sand Lake
DeMaagd, Gerald Rockford
DeMol, Richard J. Grand Rapids
Denham, R. H. Grand Rapids

ROSTER MICHIGAN STATE MEDICAL SOCIETY

DePree, Isla G.....Grand Rapids
 DePree, Joseph.....Grand Rapids
 DeVel, Leon.....Grand Rapids
 DeVries, Daniel.....Grand Rapids
 Dewar, M. M.....Grand Rapids
 Dixon, Willis L.....Grand Rapids
 Droste, James C.....Grand Rapids
 Eaton, Robert M.....Grand Rapids
 Eggleston, H. R.....Grand Rapids
 Ferguson, Lynn A.....Grand Rapids
 Ferguson, Ward S.....Grand Rapids
 Ferrand, L. G.....Rockford
 Fitts, Ralph L.....Grand Rapids
 Flynn, J. Donald.....Grand Rapids
 Foshee, J. C.....Grand Rapids
 Franz, C. H.....Grand Rapids
 Fuller, E. H.....Grand Rapids
 Gainey, James J.....Grand Rapids
 Gaikema, E. W.....Grand Rapids
 Greenen, C. J.....Grand Rapids
 German, William McK.....Grand Rapids
 Gillett, O. H.....Grand Rapids
 Grant, Lee O.....Grand Rapids
 Graybiel, George.....Caledonia
 Griffith, L. S.....Grand Rapids
 Hagerman, D. B.....Grand Rapids
 Hammond, T. W.....Grand Rapids
 Hartman, Deane C.....Grand Rapids
 Hayes, L. W.....Howard City
 Heetderks, Dewey R.....Grand Rapids
 Henry, James, Jr.....Grand Rapids
 Herrick, Ruth.....Grand Rapids
 Hill, A. M.....Grand Rapids
 Hodgen, J. T.....Grand Rapids
 Holcomb, John N.....Grand Rapids
 Holcomb, J. W.....Grand Rapids
 Holdsworth, M. J.....Grand Rapids
 Hufford, A. R.....Grand Rapids
 Hunderman, Edw.....Grand Rapids
 Hutchinson, Robert J.....Grand Rapids
 Hyland, Wm. A.....Grand Rapids
 Irwin, Thomas C.....Grand Rapids
 Ingersoll, Charles F.....Grand Rapids
 Jaracz, W. J.....Grand Rapids
 Kelly, Robert E.....Grand Rapids
 Kemmer, Thomas R.....Grand Rapids
 Kendall, Eugene L.....Grand Rapids
 Klaus, C. D.....Grand Rapids
 Kniskern, P. W.....Grand Rapids
 Kooistra, Henry P.....Grand Rapids
 Kremer, John.....Grand Rapids

Kreulen, H. J.....Grand Rapids
 Krupp, C. G.....Grand Rapids
 Laird, Robert G.....Grand Rapids
 Lamb, George F.....Grand Rapids
 Lanning, N. E.....Grand Rapids
 Lanting, D. B.....Grand Rapids
 Lass, E. H.....Grand Rapids
 LeRoy, Simeon.....Grand Rapids
 Lieffers, Harry.....Grand Rapids
 Lyman, Wm. D.....Grand Rapids
 MacPherson, Alex. G.....Grand Rapids
 Marrin, M. M.....Grand Rapids
 Marsh, J. P.....Grand Rapids
 Maurits, Reuben.....Grand Rapids
 McDonell, James A.....Lowell
 McKenna, J. L.....Grand Rapids
 McKinley, L. M.....Grand Rapids
 McRae, John H.....Grand Rapids
 Meengs, Jacob E.....Grand Rapids
 Mehney, G. H.....Grand Rapids
 Miller, Fred E.....Grand Rapids
 Miller, J. Duane.....Grand Rapids
 Mitchell, H. C.....Grand Rapids
 Mitchell, W. B.....Grand Rapids
 Moen, Cornetta, G.....Grand Rapids
 Moll, Arthur M.....Grand Rapids
 Mollman, Arthur.....Grand Rapids
 Moore, Vernon, M.....Grand Rapids
 Mulder, J. D.....Grand Rapids
 Murphy, M. J.....Grand Rapids
 Nelson, A. R.....Grand Rapids
 Nesbitt, E. N.....Grand Rapids
 Noordewier, Albert.....Grand Rapids
 Northouse, Peter B.....Grandville
 Northrup, Wm.....Grand Rapids
 Nyland, Albertus (Honorary).....Grand Rapids
 Oliver, W. W.....Grand Rapids
 Patterson, P. W.....Grand Rapids
 Pedden, J. R.....Grand Rapids
 Phillips, J. W.....Grand Rapids
 Pyle, Henry J.....Grand Rapids
 Ralph, L. Paul.....Grand Rapids
 Rawson, A. P.....Grand Rapids
 Reed, Torrance.....Grand Rapids
 Rigerink, J. W.....Grand Rapids
 Riley, G. L.....Grand Rapids
 Roberts, Mortimer E.....Grand Rapids
 Robinson, Harold.....Grand Rapids
 Rogers, John R.....Grand Rapids

Roth, Emil M.....Grand Rapids
 Schermerhorn, L. J.....Grand Rapids
 Schnoor, E. W.....Grand Rapids
 Sevensma, E. S.....Grand Rapids
 Sevey, L. E.....Grand Rapids
 Shepard, B. H.....Lowell
 Shellman, Millard W.....Grand Rapids
 Smith, A. B.....Grand Rapids
 Smith, Edwin M.....Grand Rapids
 Smith, R. Earle.....Grand Rapids
 Smith, Ferris N.....Grand Rapids
 Smith, Richard R.....Grand Rapids
 Snapp, Carl F.....Grand Rapids
 Snyder, Clarence.....Grand Rapids
 Southwick, George H.....Grand Rapids
 Stonehouse, G. G.....Grand Rapids
 Stuart, G. J.....Grand Rapids
 Sugg, Cullen E.....Grand Rapids
 Swenson, H. C.....Grand Rapids
 Ten Have, J.....Grand Rapids
 Teusink, J. H.....Cedar Springs
 Tidey, Marcus B.....Grand Rapids
 Tolley, Edw. W.....Grand Rapids
 Torgerson, Wm. R.....Grand Rapids
 Van Bree, R. S.....Grand Rapids
 Vanden Berg, Henry J.....Grand Rapids
 Van Duine, H.....Bryon Center
 Van Solkema, Arthur.....Grandville
 Van Woerkom, Daniel.....Grand Rapids
 Vann, Norman S.....Grand Rapids
 Veldman, Harold E.....Grand Rapids
 Veenboer, Wm. H.....Grand Rapids
 Vis, William R.....Grand Rapids
 Votey, Frank A.....Grand Rapids
 Vyn, J. D.....Grand Rapids
 Webb, Rowland.....Grand Rapids
 Webster, G. W.....Grand Rapids
 Wells, Merrill.....Grand Rapids
 Wenger, A. V.....Grand Rapids
 Wenger, John N.....Coopersville
 Westrate, Paul.....Grand Rapids
 Whalen, John M.....Grand Rapids
 Whinery, Joseph B.....Grand Rapids
 Whinery, J. F.....Grand Rapids
 Willits, P. W.....Grand Rapids
 Wolfe, H. C.....Grand Rapids
 Woodburne, A. R.....Grand Rapids
 Wright, John M.....Grand Rapids
 Yegge, J. P.....Kent City

Lapeer County

Berghorst, John.....Imlay City
 Best, Herbert M.....Lapeer
 Bishop, G. C.....Almont
 Burley, David H.....Almont
 Chapin, Clarence D.....Columbiaville

Crankshaw, D. W.....Imlay City
 Dorland, Clark.....Lapeer
 Hanna, Fred R.....Lapeer
 Jackson, Carl C.....Imlay City
 McBride, J. R.....North Branch

Merz, Henry G.....Lapeer
 O'Brien, Daniel J.....Lapeer
 Thomas, J. Orville.....North Branch
 Tinker, F. A. (Emeritus).....Lapeer
 Zemmer, H. B.....Lapeer

Lenawee County

Abraham, A. O.....Hudson
 Beebe, I. J.....Morenci
 Blanchard, L. E.....Hudson
 Bland, J. P.....Adrian
 Case, C. W.....Onsted
 Chase, Armetus W.....Adrian
 Claflin, G. M.....Deerfield
 Clark, A. D.....Adrian
 Claxton, W. T.....Britton
 Colbath, W. E.....Adrian
 Growt, B. H.....Addison
 Hall, George C.....Adrian
 Hamblly, S. B.....Onsted
 Hammel, H. H.....Tecomseh

Hardy, P. B.....Tecomseh
 Heffron, C. H.....Adrian
 Heffron, Howard H.....Adrian
 Helzerman, Ralph F.....Tecomseh
 Hewes, A. B.....Adrian
 Hornsby, W. B.....Clinton
 Howland, F. A.....Adrian
 Jewett, Wm. E., Jr.....Adrian
 Lamley, Arthur E.....Blissfield
 Lamley, Geo. H.....Blissfield
 Lane, C. S.....Hudson
 Loveland, Horace H.....Tecomseh
 MacKenzie, W. S.....Adrian
 McCue, F. J.....Hudson

Marsh, R. G. B.....Tecomseh
 Miller, Perry L.....Adrian
 Morden, Esli T.....Adrian
 Murawa, V. J.....Deerfield
 Patmos, Bernard.....Adrian
 Peters, W. L.....Morenci
 Raabe, E. C.....Morenci
 Rogers, J. D.....Adrian
 Spalding, A. L.....Hudson
 Stafford, Leo J.....Adrian
 Tubbs, R. V.....Blissfield
 Van Dusen, C. A.....Blissfield
 Whitney, O.....Adrian
 Wood, A. C.....Adrian

Livingston County

Backe, John C.....Detroit
 Brigham, Jeanette.....Howell
 Burt, K. L.....Howell
 Cameron, Duncan A.....Brighton
 Glenn, Bernard H.....Fowlerville
 Hayner, R. A.....Howell

Hill, Harold C.....Howell
 Hendren, J. J.....Fowlerville
 Huntington, H. G.....Howell
 Laboe, Edward W.....Howell
 Leslie, G. L.....Howell
 Lojacono, Salvatore.....Howell

McGregor, Archie J.....Brighton
 McIndoe, R. Bruce.....Howell
 Mellus, H. P.....Brighton
 Sigler, Hollis L.....Howell
 Stephens, Duncan C.....Howell

Luce County

Bohn, Frank P.....Newberry
 Campbell, Earl H.....Newberry
 Gibson, Robert E.....Newberry
 Hart, Clarence D.....Newberry

Perry, Henry E.....Newberry
 Purmort, Wm. R., Jr.....Newberry
 Rehn, Adolph T.....Newberry
 Spinks, Robert E.....Newberry

Surrell, Mathew A.....Newberry
 Swanson, George F.....Newberry
 Toms, Charles B.....Newberry

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Macomb County

Allen, LeRoy K.....Roseville
Bailey, R.....St. Clair Shores
Banting, O. F.....Richmond
Berry, Henry G.....Mt. Clemens
Bower, A. B.....Armada
Caster, E. Wilbur.....Mt. Clemens
Croman, Joseph M., Jr.....Mt. Clemens
Croman, Joseph M., Sr.....Mt. Clemens
Curlett, J. E.....Roseville
Dudzinski, E. J.....New Baltimore
Engels, John A.....Richmond
Fluemer, Oswald.....Mt. Clemens
Greenshields, Robert.....Romeo

Hawley, R. E.....St. Clair Shores
Heine, Austin W.....Mt. Clemens
Kane, Wm. J.....Mt. Clemens
Lane, W. D.....Romeo
Lynch, Russell.....Centerline
Meek, Charles.....New Baltimore
Moore, G. F.....Mt. Clemens
Norton, W. H.....Mt. Clemens
Reichman, Joseph J.....Mt. Clemens
Rivard, C. H.....St. Clair Shores
Rothman, A. M.....East Detroit
Reitzel, Rufus H.....Mt. Clemens
Ruedisueli, C. A.....East Detroit

Russell, T. P.....Centerline
Salot, R. F.....Mt. Clemens
Scher, Joseph N.....Mt. Clemens
Seaman, John.....New Haven
Smith, M. C.....Mt. Clemens
Sturm, Fred A.....St. Clair Shores
Thompson, A. A.....Mt. Clemens
Ullrich, R. W.....Mt. Clemens
Wilde, M. M.....Warren
Wiley, Bruce.....Utica
Wiley, Herbert H.....Utica
Wolfson, Victor H.....Mt. Clemens

Manistee County

Bryan, Kathryn M.....Manistee
Grant, C. L.....Manistee
Fairbanks, Stephen.....Luther
Hansen, E. C.....Manistee
Jamieson, David A.....Arcadia

Konopa, John F.....Manistee
Lewis, Lee A.....Manistee
MacMullen, Harlen.....Manistee
McKay, A. A.....Midland
Miller, E. B.....Manistee

Mullenmeister, H. F.....Bear Lake
Norconk, Ward H.....Bear Lake
Oakes, Ellery A.....Manistee
Ramsdell, Homer A.....Manistee
Switzer, Lars W.....Manistee

Marquette-Alger Counties

Barnes, Haldor.....Munising
Bennett, Arthur K.....Marquette
Berry, Robert F.....Morgan Heights
Bertucci, J. P.....Ishpeming
Burke, R. A.....Palmer
Casler, W. L.....Marquette
Cooperstock, M.....Marquette
Corcoran, W. A.....Ishpeming
Cowan, Donald.....Marquette
Crane, J. D.....Ishpeming
Drury, Chas. P.....Marquette
Elzinga, E. R.....Marquette
Erickson, Arvid W.....Ishpeming

Felch, Theodore A. (Honorary).....
Fennig, F. A.....Ishpeming
Hanelin, H. A.....Marquette
Hartt, P. P.....Ishpeming
Hirwas, D. L.....Marquette
Hornbogen, D. P.....Marquette
Janes, R. Grant.....Marquette
Keskey, Geo. I.....Marquette
Lambert, W. C.....Marquette
LeGolvan, C.....Marquette
Lindquist, N. L.....Negaunee
McCann, Neal J.....Ishpeming

McIntyre, D. R.....Negaunee
Mudge, W. A.....Negaunee
Niemi, O. I.....Marquette
Picotte, Wilfrid S.....Ishpeming
Robbins, Nelson J.....Negaunee
Schutz, W. J.....Munising
Serbst, Charles.....Gwinn
Sicotte, Isiah.....Michigan
Swinton, A. L.....Marquette
Talso, Jacob.....Ishpeming
Vandeventer, Vivian H.....Ishpeming
Van Riper, Paul.....Champion
Wickstrom, G. W.....Munising

Mason County

Blanchett, Victor J.....Custer
Force, Wm. H.....Ludington
Goulet, L. J.....Ludington
Hoffman, Howard.....Ludington

Hunt, Ivan L.....Scottville
Kirwan, Edward J.....Ludington
Martin, Wm. S.....Ludington
Paukstis, Charles.....Ludington

Spencer, C. M.....Scottville
Switzer, G. O. (Honorary).....Ludington
Taylor, W. H.....Ludington

Mecosta-Osceola Counties

Bruggema, Jacob.....Evert
Bunce, E. P.....Trufant
Campbell, James B.....Big Rapids
Chess, Leo F.....Reed City
Clark, Chester.....Morley
Franklin, Benjamin L.....Remus

Grieve, Glenn.....Big Rapids
Igloe, Max C.....Big Rapids
Inkovich, Paul.....Evert
Kilmer, Paul B.....Reed City
McIntyre, Donald.....Big Rapids
McGrath, V. J.....Reed City

Peck, Louis K.....Barryton
Power, C. J.....Remus
Soper, Charles L.....Barryton
Treynor, Thomas P.....Big Rapids
White, J. A.....Morley
Yeo, Gordon H.....Big Rapids

Menominee County

Berg, Laurence A.....Menominee
DeWane, F. J.....Menominee
Flanagan, Clarence B.....Menominee
Jones, Wm. S.....Menominee
Kaye, J. T.....Menominee

Kerwell, K. C.....Stephenson
Mason, Stephen C.....Menominee
Peterson, A. R.....Daggett
Sawbridge, Edward (Emeritus).....
Stephenson

Schaen, Irvin.....Hermansville
Scully, John C.....Menominee
Setheny, Henry T.....Menominee
Towey, J. W.....Powers

Midland County

Beck, Frank K.....Coleman
Gay, Harold H.....Midland
Grew, N. C.....Midland
High, C. V.....Midland

Kazdan, Louis.....Midland
McCallum, Charles.....Midland
Maynard, W. A.....Coleman
Meisel, E. H.....Midland
Pike, Melvin H.....Midland

Place, Edwin H.....Midland
Sherk, J. H.....Midland
Sjolander, Gust.....Midland
Towsley, W. D.....Midland

Monroe County

Ames, Florence.....Monroe
Barker, Vincent L.....Monroe
Bond, W. W.....Monroe
Cooper, E. M.....Rockwood
Hunter, Dean C.....Monroe
Dusseau, S. V.....Erie
English, R. I.....Temperance
Ewing, R. T.....Monroe
Gelhaus, Wm. J.....Monroe
Glenn, Audrey.....Monroe

Golvinaux, C. J.....Monroe
Graubner, F. L.....Monroe
Heffernan, J. F.....Carleton
Humphrey, J. A.....Monroe
Hunter, M. A.....Monroe
Landon, Herbert W.....Monroe
Long, Edgar C.....Monroe
Long, Sara.....Monroe
McDonald, T. A.....Monroe
McGeoch, R. W.....Monroe

McMillin, J. H.....Monroe
Meck, H. L.....Dundee
Newcomb, S. O.....Ida
Parmelee, O. E.....Lambertville
Reisig, A. H.....Monroe
Siffer, J. J.....Monroe
Smith, Wm. A.....Petersburg
Stolpestad, C. T.....Monroe
Tomlinson, Ledyard.....Newport
Williams, Robert J.....Monroe

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Muskegon County

Anderson, A. J.....Muskegon
August, R. V.....Muskegon Heights
Barnard, Helen.....Muskegon
Bartlett, F. H.....Muskegon
Beers, Charles.....Holt
Bloom, C. J.....Muskegon
Boonstra, Frank.....Muskegon
Bowers, J. G.....Muskegon
Boyd, D. R.....Muskegon
Bradshaw, Park S.....Muskegon
Cavanagh, R. G.....Muskegon
Chapin, Wm. S.....Muskegon Heights
Closz, H. F.....Muskegon
Cohan, Sol G.....Muskegon
Colignon, C. M.....Muskegon
Collier, C. C.....Whitehall
D'Alcorn, Ernest.....Muskegon Heights
Dasler, A. F.....Muskegon Heights
Derezinski, Clement F.....Muskegon
Diskin, Frank.....Muskegon
Dolfin, W. E.....Muskegon
Douglas, Robert.....Muskegon
Drummond, S. J.....Cassopolis
Durham, C. J.....Muskegon
Eckerman, C. T.....Muskegon
Egan, A. B.....Muskegon
Fillingham, Enid.....Muskegon

Fleischman, C. B.....Muskegon
Fleishman, Norman.....Muskegon
Foss, Ed. O.....Muskegon
Garber, F. W., Jr.....Muskegon
Garland, J. O.....Muskegon
Gillard, James.....Muskegon
Goltz, Martha.....Montague
Hagen, William A.....Muskegon
Hannum, F. W.....Muskegon
Harrington, A. F.....Muskegon
Harrington, R. J.....Muskegon
Hartwell, S. W.....Muskegon
Heneveld, John.....Muskegon
Holly, Leland E.....Muskegon
Holmes, Roy H.....Muskegon
Jackson, S. A.....Muskegon
Kane, Thomas J.....Muskegon
Keilin, Marie.....Muskegon
Kerr, H. J.....Muskegon
Kniskern, E. L.....Muskegon
LeFevre, George L.....Muskegon
LeFevre, Louis.....Muskegon
LeFevre, William M.....Muskegon
LaCore, O. M.....Muskegon Heights
Lange, E. W.....Muskegon
Lauretti, Emil.....Muskegon
Laurin, V. S.....Muskegon

Loomis, John L.....Muskegon
Loughery, H. B.....Muskegon
Mandeville, C. B.....Muskegon
Meengs, M. B.....Muskegon
Medema, Paul E.....Muskegon
Miller, Philip L.....Muskegon
Morford, F. N.....Muskegon
Morse, Bertram W.....Whitehall
Mulligan, A. W.....Muskegon
Oden, Constantine L.....Muskegon
Olson, R. G.....Muskegon Heights
Pangerl, Carl.....Muskegon Heights
Pettis, Emmett.....Muskegon
Powers, Lunette.....Muskegon
Price, Leonard.....Muskegon
Pyle, H. J.....Muskegon
Risk, R. A.....Muskegon
Risk, Robert D.....Muskegon
Scholte, W.....Muskegon
Sporr, A. A.....Muskegon
Stone, Maxwell E.....Muskegon
Swartout, W. C.....Muskegon
Teifer, Charles A.....Muskegon
Thieme, S. W.....Ravenna
Thornton, E. S.....Muskegon
Wilke, C. A.....Montague
Wilson, P. S.....Muskegon

Newaygo County

Barnum, W. H.....Fremont
Deur, T. R.....Grant
Geerlings, Lambert.....Fremont

Geerlings, Willis.....Fremont
Lettinga, D.....Grant
Moore, H. R.....Newaygo
Post, Guy.....White Cloud

Stevens, S.....Bitely
Stryker, O. D.....Fremont
Tompsett, Arthur C.....Hesperia

Northern Michigan

Armstrong, Robert B.....Charlevoix
Burns, Dean C.....Petoskey
Conkle, Guy C.....Boyne City
Conway, Wm. S.....Petoskey
Craddock, John.....Mackinaw City
Dean, Carlton.....Charlevoix
Duffie, Don H.....Central Lake
Engle, Ralph D.....Petoskey
Frank, Gilbert E.....Harbor Springs
Grillet, F. F.....Alanson

Harrington, H. M.....East Jordan
Huebner, A. C.....Onaway
King, Geo. W.....Charlevoix
Larson, W. E.....Levering
Lashmet, Floyd H.....Petoskey
MacGregor, J. G.....Boyne City
Mast, W. H.....Petoskey
Mayne, Frederick C.....Cheboygan
McClure, Robert J.....Charlevoix
McMillan, Fraley.....Charlevoix
Miller, Samuel L.....Cheboygan

Monfort, Robert.....Onaway
Palmer, Russell.....St. James
Parks, W. H.....Petoskey
Reed, Wilbur F. (Emeritus).....
.....Cheboygan
Rodgers, John.....Bellaire
Saltonstall, Gilbert B.....Charlevoix
Stringham, J. R.....Cheboygan
Van Dellen, Jerrian.....Ellsworth
Van Leuven, B. H.....Petoskey

O.M.C.O.R.O. County

Beeby, R. J.....West Branch
Clippert, C. G.....Grayling
Crandell, C. H.....West Branch
Egle, Joseph L.....Gaylord
Ford, Ruey O.....Gaylord
Harris, Levi A. (Emeritus).....Gaylord

Inman, J.....Kalkaska
Jardine, Hugh.....West Branch
Keyport, C. R.....Grayling
Lee, F. W.....Fairview
Martozowka, M. A.....Roscommon
McDowell, A. S.....West Branch

McDowell, Douglas.....West Branch
McKillop, G. L.....Gaylord
Peckham, Richard.....Gaylord
Sargent, L. E.....Kalkaska
Stealey, Stanley.....Grayling
Thompson, Sue H.....West Branch

Oakland County

Abbott, V. C.....Pontiac
Aschenbrenner, Z. R.....Farmington
Bachelder, Frank S.....Pontiac
Bachelor, John W.....Oxford
Baker, Frederick A.....Pontiac
Baker, Robert H.....Pontiac
Barker, Howard B.....Pontiac
Bauer, Ernest W.....Hazel Park
Beck, O. O.....Birmingham
Benning, C. H.....Peoria, Ill.
Borland, Alexander.....Pontiac
Burke, Chauncey G.....Pontiac
Burt, F. J.....Holly
Butler, Samuel A.....Pontiac
Cameron, D. A.....Royal Oak
Castell, Daniel G.....Pontiac
Christie, J. W.....Pontiac
Church, J. E.....Pontiac
Cobb, Leon F.....Pontiac
Cooper, Robert J.....Pontiac
Crissman, H. C.....Ferndale
Cudney, Ethan B.....Pontiac
Dalgren, Carl.....Keego Harbor
Darling, C. G., Jr.....Pontiac
Ekelund, C. T.....Pontiac
Farnham, Lucius A.....Pontiac
Ferris, Ralph G.....Birmingham
Fitzpatrick, Francis.....Pontiac
Fox, John W.....Pontiac
Furlong, Harold A.....Pontiac
Garipey, Bernard F.....Royal Oak
Gately, L. Warren.....Pontiac
Gerls, Frank B.....Pontiac
German, Frank D.....Pontiac
Gordon, J. H.....Birmingham
Grant, Wm. A.....Milford

Green, Wm. M.....Pontiac
Hackett, Daniel J.....Pontiac
Halsted, Lee H.....Farmington
Hammer, Carl W.....Oxford
Hammonds, E. E.....Birmingham
Hathaway, Clarence L.....Lake Orion
Hathaway, Wm.....Rochester
Harvey, Campbell.....Pontiac
Henry, Colonel R.....Ferndale
Huffman, M. R.....Milford
Howlett, E. V.....Pontiac
Hoyt, D. F.....Pontiac
Hume, T. W. K.....Auburn Heights
Hurst, Daniel D.....Pleasant Ridge
Jones, Morrell M.....Pontiac
Kemp, W. Lloyd.....Birmingham
Lambert, Alvin G.....Ferndale
Lambie, John S.....Pontiac
Lewis, Sol M.....Ferndale
Lindsay, E. J.....Walled Lake
Margraves, Edmund D.....Royal Oak
Markley, John M.....Pontiac
McConkie, J. P.....Birmingham
McEvoy, Francis J.....Royal Oak
McNeill, H. H.....Pontiac
Mercer, Frank A.....Pontiac
Mienke, Herman E.....Hazel Park
Miller, Raymond E.....Clarkston
Mitchell, B. M.....Pontiac
Mooney, C. A.....Ferndale
Morrison, J. S.....Royal Oak
Neafe, Chas. A.....Pontiac
Olsen, Richard E.....Pontiac
Pauli, Theodore H.....Pontiac
Pool, H. H.....Pontiac
Porritt, Ross J.....Pontiac

Raynale, George P.....Birmingham
Reid, F. T.....Clawson
Riker, Aaron D.....Pontiac
Roehm, Harold R.....Birmingham
Rooks, Wendell H.....Pontiac
Russell, Vincent.....Royal Oak
St. John, Harold A.....Pontiac
Seaborn, A. J.....Royal Oak
Schoenfeld, John D.....Birmingham
Sheffield, L. C.....Pontiac
Sherman, G. A.....Pontiac
Sibley, H. A.....Pontiac
Simpson, E. K.....Pontiac
Spears, M. L.....Pontiac
Spencer, Lloyd H.....Royal Oak
Spoehr, Eugene L.....Ferndale
Spohn, Earl.....Royal Oak
Stahl, Harold E.....Oxford
Stanley, Wm. F.....Ferndale
Starker, Clarence T.....Pontiac
Steinberg, Norman.....Royal Oak
Stolpman, A. K.....Birmingham
Strain, C. S.....Rochester
Sutherland, Clark J.....Clarkston
Sutton, Palmer E.....Royal Oak
Terry, Stuart.....Pontiac
Tuck, R. G.....Pontiac
Wagley, P. V.....Pontiac
Wagner, Ruth E.....Royal Oak
Watson, Arthur M.....Lake Orion
Watson, Thomas Y.....Birmingham
Wiers, W. W.....Royal Oak
Williams, Hugh W.....Pontiac
Yoh, Harry B.....Pontiac
Young, Arthur R.....Pontiac

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Oceana County

Day, Clinton.....Hart
Hayton, A. R.....Shelby
Heard, William.....Pentwater

Heysett, N. W.....Hart
Jensen, Viggo.....Shelby
Lemke, Walter M.....Shelby
Munger, L. P.....Hart

Nicholson, John H.....Hart
Reetz, Fred A.....Shelby
Wood, Merle G.....Hart

Ontonagon County

Bender, Jesse L.....Mass
Corkill, C. C.....Ontonagon
Evans, Edwin J.....Ontonagon

Hogue, H. B.....Ewen
McHugh, Frank W.....Ontonagon
Rubinfeld, S. H.....Ontonagon

Strong, W. F.....Ontonagon
Whiteshield, C. F.....Trout Creek

Ottawa County

Beernink, E. H.....Grand Haven
Bloemendaal, D. C.....Zeeland
Bloemendaal, W. B.....Grand Haven
Boone, Cornelius E.....Zeeland
Bos, G. D.....Holland
Clark, N. H.....Holland
DeVries, H. C.....Holland
DeWitt, S. L.....Grand Haven
Harms, H. P.....Holland
House, M. E.....Holland

Huizinga, John G.....Holland
Irvin, H. C.....Holland
Kemmer, Gerrit.....Zeeland
Kools, Wm. C.....Holland
Leenhouts, Abraham.....Holland
Long, C. E.....Grand Haven
Mulder, C. D.....Spring Lake
Nichols, Rudolph H.....Holland
Presley, Wm. J.....Grand Haven
Stickley, A. E.....Coopersville
Tappan, Wm. M.....Holland

Ten Have, Ralph.....Grand Haven
Timmerman, E. C.....Coopersville
Ver Duin, J.....Grand Haven
Van Der Berg, E.....Holland
Van der Velde, O.....Holland
Wells, Kenneth.....Spring Lake
Westrate, William.....Holland
Wiersma, Silas C.....Hudsonville
Winters, John K.....Holland
Winters, Wm. G.....Holland

Saginaw County

Ackerman, G. L.....Saginaw
Anderson, W. K.....Saginaw
Bagley, U. S.....Saginaw
Bagshaw, David E.....Saginaw
Beckwith, Bertram H.....Saginaw
Berberovitch, T. F.....Saginaw
Bishop, H. M.....Saginaw
Brender, Fred P.....Frankenmuth
Brock, W. H.....Saginaw
Butler, M. G.....Saginaw
Button, A. C.....Saginaw
Cady, F. J.....Saginaw
Cameron, Allen K.....Saginaw
Campbell, L. A.....Saginaw
Catzone, R. J.....Merrill
Clark, Wilbert B.....Saginaw
Claytor, Archer A.....Saginaw
Cortopassi, Andre.....Saginaw
Durman, Donald.....Saginaw
Ely, C. W.....Saginaw
English, William F.....Saginaw
Ernst, Arthur R.....Saginaw
Eymmer, Esther.....Saginaw
Fleschner, Thomas E.....Birch Run
Freeman, Frederick W.....Saginaw
Galsterer, E. C.....Saginaw
Goman, Louis D.....Saginaw
Grigg, Arthur.....Saginaw
Hand, Eugene.....Saginaw
Harvie, L. C.....Saginaw
Helmkamp, Herbert O.....Saginaw
Hester, E. G.....Saginaw

Hill, Victor L.....Saginaw
Hohn, F. J.....Saginaw
Imerman, Harold M.....Saginaw
Jaenichen, R.....Saginaw
James, J. W.....Saginaw
Jiroch, R. S.....Saginaw
Jordan, Leo A.....Saginaw
Kahn, Paul.....Frankenmuth
Keller, S. S.....Saginaw
Kemp, J.....Saginaw
Kempston, R. M.....Saginaw
Kirchgerog, Clemens G.....Frankenmuth
Kleekamp, H.....Saginaw
Knott, Harriet.....Saginaw
Leitch, Arthur E.....Saginaw
Ling, Ernest M.....Hemlock
Lohr, O. W.....Saginaw
Longstreet, Martha L.....Saginaw
Luger, F. E.....Saginaw
MacKinnon, Edwin D.....Saginaw
Markey, Joseph P.....Saginaw
Martzowka, Wm. P.....Saginaw
Maurer, John A.....Saginaw
McClinton, N. F.....Saginaw
McGregor, R.....Saginaw
McKinney, Alex R.....Saginaw
McLandress, Joshua A.....Saginaw
McMeekin, James W.....Saginaw
Meyer, Henry J.....Saginaw
Moon, A. R.....Saginaw
Morris, Keith M.....Saginaw
Mudd, Richard D.....Saginaw

Murphy, Albert P.....Saginaw
Murray, Charles R.....Saginaw
Novy, F. O.....Saginaw
O'Reilly, Wm. J.....Saginaw
Ostrander, Frank W.....Freeland
Pietz, Frederick.....Saginaw
Pillsbury, Edw. A.....Frankenmuth
Poole, Frank A.....Saginaw
Potvin, Clifford D.....Merrill
Richter, Emil P. W.....Saginaw
Rosenberg, Robert.....Saginaw
Rubin, H.....Saginaw
Ryan, M. D.....Saginaw
Ryan, R. S.....Saginaw
Sample, Chester H. (Honorary).....Saginaw
Sample, J. T.....Saginaw
Sargent, D. V.....Saginaw
Schaiberger, Elmer.....Saginaw
Sheldon, S.....Saginaw
Slack, Walter K.....Saginaw
Stander, A. C.....Saginaw
Thomas, Dale.....Saginaw
Tiedke, G. E.....Saginaw
Toshach, C. E.....Saginaw
Wallace, H. C.....Saginaw
Wheeler, Dorothy.....Saginaw
Wilson, H. Roy.....Saginaw
Wixted, John F.....Chesaning
Wixted, Julia L.....Chesaning
Yntema, S.....Saginaw

St. Clair County

Armsbury, A. B.....Marine City
Atkinson, J. M.....Port Huron
Attridge, J. A.....Port Huron
Battley, J. C. Sinclair...Port Huron
Borden, C. L.....Yale
Boughner, W. H.....Algonac
Bovee, M. E.....Port Huron
Brush, Howard O.....Port Huron
Burke, Ralph M.....Port Huron
Burley, Jacob H.....Port Huron
Callery, A. L.....Port Huron
Campbell, R. H.....St. Clair
Carney, F. V.....St. Clair
Cooper, T. H.....Port Huron
DeGurse, T. E.....Marine City
Derck, W. P.....Marysville

Engelman, A. A.....St. Clair
Fraser, Robert C.....Port Huron
Heavenrich, T. F.....Port Huron
Holcomb, R. J.....Marine City
Johnson, Howard R.....B shop Hill, Ill.
Kest, Geo. M.....Port Huron
LeGalle, K. B.....Port Huron
Licker, R. R.....Port Huron
Ludwig, F. E.....Port Huron
McCue, Crystal C.....Goodells
MacKenzie, Alexander J.....Port Huron
MacPherson, C. A.....St. Clair
Martin, C. S.....Port Huron
McColl, D. J.....Port Huron
McColl, Neil J.....Port Huron
Meredith, E. W.....Port Huron
Patterson, D. W.....Port Huron

Pollock, Donald A.....Yale
Reynolds, Annie E.....Port Huron
Ryerson, W. W.....Port Huron
Schaefer, W. A.....Port Huron
Sites, E. C.....Port Huron
Smith, Reginald.....Port Huron
Thomas, C. F.....Port Huron
Treadgold, Douglas.....Port Huron
Vroman, M. E.....Port Huron
Waltz, J. F.....Capac
Ware, John R.....Port Huron
Wass, Henry C.....St. Clair
Waters, George.....Port Huron
Wellman, Joseph E.....Port Huron
Wight, William G.....Yale
Zemmer, Adrian L.....Port Huron

St. Joseph County

Buell, Martin.....Sturgis
Fiegel, S. A.....Sturgis
Fortner, R. J.....Three Rivers
Hoekman, Aben.....Constantine
Kane, David M.....Sturgis

Miller, C. G.....Sturgis
Parrish, Marion F.....Sturgis
Rice, John W.....Sturgis
Shaw, G. D.....Mendon
Sheldon, J. P.....Sturgis
Slote, L. K.....Constantine

Springer, R. A.....Centerville
Sweetland, G. J.....Constantine
Weir, D. C.....Three Rivers
Wilkerson, Nina C.....Sturgis
Ziment, R. D.....Constantine

Schoolcraft County

Broberg, Gail.....Manistique
Fyvie, James.....Manistique

Ross, Donald.....Manistique
Shaw, George A.....Manistique

Tucker, A. R.....Manistique

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Shiawassee County

Alexander, Reuben G.....Laingsburg
Arnold, Alfred L., Jr.....Owosso
Arnold, A. L., Sr. (Emeritus).....Owosso
Bates, L. F.....Durand
Brandel, J. M.....Owosso
Brown, Richard J.....Owosso
Buzzard, Walter D.....Chesaning
Carney, Edward J.....Durand
Cramer, Geo. L. G.....Owosso
Crane, C. A.....Corunna
Fillinger, W. B.....Ovid

Greene, I. W.....Owosso
Haviland, James J.....Owosso
Hume, Arthur M. (Emeritus).....Owosso
Hume, Harold A.....Owosso
Janci, Julius.....Owosso
Linden, V. E.....Durand
McElmurry, N. K.....Perry
McKnight, E. R.....Owosso
Parker, W. T.....Owosso
Pochert, R. C.....Owosso
Richards, C. J.....Durand

Sackrider, Geo. P.....Owosso
Shepherd, W. F.....Owosso
Slagh, E. M.....Elsie
Soule, Glenn T.....Henderson
Taylor, W. M.....Ovid
Wade, G. B.....Laingsburg
Ward, Walter E. (Emeritus).....Owosso
Watts, Fred A.....Owosso
Weinkauff, W. F.....Corunna
Wilcox, Anna L.....Owosso
Wilcox, C. M.....Owosso

Tuscola County

Barbour, Harry A.....Mayville
Bates, George.....Kingston
Cook, Raymond.....Akron
Dickerson, W. W.....Wahjamega
Dixon, Robert L.....Wahjamega
Donahue, H. Theron.....Cass City
Gugino, Frank J.....Reese
Handy, John E. (Emeritus).....Caro
Hoffman, T. E.....Vassar
Howlett, Robert R.....Caro

Johnson, O. G.....Mayville
Kaven, G. H.....Unionville
Kralick, Louise C.....Wahjamega
MacRae, L. D.....Gagetown
Maurer, J. G.....Reese
McCoy, I. D.....Bad Axe
Merrill, Elmer H.....Caro
Morris, Frank L.....Cass City
Petrie, W. P.....Caro
Ross, Alexander T.....Wahjamega

Rundell, Annie Stevens.....Vassar
Ruskin, D. B.....Fairgrove
Salot, D. G.....Millington
Savage, Lloyd L.....Caro
Spohn, U. G.....Fairgrove
Starmann, Bernard H.....Cass City
Swanson, Ewald C.....Vassar
Vatz, Jack A.....Millington
Vail, Harry F.....Unionville
Von Renner, Otto.....Vassar

Washtenaw County

Alexander, John.....Ann Arbor
Adams, James F.....Ann Arbor
Badgley, Carl.....Ann Arbor
Ballmer, Robert S.....Ann Arbor
Barker, Paul.....Ann Arbor
Barnwell, John.....Ann Arbor
Barr, A. S.....Ann Arbor
Barss, Harold D.....Ypsilanti
Bartlett, R. M.....Ann Arbor
Bassow, Paul.....Ann Arbor
Beebe, Hugh M.....Ann Arbor
Bell, Margaret.....Ann Arbor
Belote, G. H.....Ann Arbor
Belser, Walter.....Ann Arbor
Bigelow, Robert B.....Boston, Mass.
Boyd, David A.....Ann Arbor
Brace, Wm. M.....Ann Arbor
Braden, Spencer.....Ann Arbor
Breakay, Jas. R.....Ypsilanti
Brinkman, Harry.....Ann Arbor
Brown, Phillip.....Ypsilanti
Brown, Willis E.....Ann Arbor
Brownell, Durwin.....Ann Arbor
Bruce, James D.....Ann Arbor
Camp, Carl Dudley.....Ann Arbor
Carpenter, L. C.....Ann Arbor
Clements, Glenn T.....Ann Arbor
Coller, F. A.....Ann Arbor
Combs, Arnold B.....Ann Arbor
Conn, Jerome W.....Ann Arbor
Cowie, D. M.....Ann Arbor
Cummings, H. H.....Ann Arbor
Curtis, A. C.....Ann Arbor
Davis, Marion I.....Ann Arbor
DeJong, Russell.....Ann Arbor
DeTar, John S.....Milan
Dirksee, Paul.....Ann Arbor
Donaldson, S. W.....Ann Arbor
Duffee, M. L.....Ann Arbor
Emerson, Herbert W.....Ann Arbor
Failing, Joseph H.....Ann Arbor
Field, Henry, Jr.....Ann Arbor
Forsythe, W. E.....Ann Arbor
Fralick, F. Bruce.....Ann Arbor
Freyberg, Richard H.....Ann Arbor
Frye, Carl H.....Ann Arbor
Furstenberg, Albert C.....Ann Arbor
Ganzhorn, Edwin.....Ann Arbor
Gardiner, Sprague.....Ann Arbor
Gates, John L.....Ann Arbor
Georg, Conrad.....Ann Arbor
Gordon, Vida H.....Ann Arbor
Grosh, L. C.....Ypsilanti

Gulde, Andros.....Chelsea
Gump, M. E.....Ann Arbor
Hannum, M. R.....Milan
Haight, Cameron.....Ann Arbor
Harris, Bradley M.....Ypsilanti
Harris, H. W.....Ann Arbor
Hauser, I. J.....Ann Arbor
Haynes, Harley A.....Ann Arbor
Healey, Claire E.....Ann Arbor
Himler, Leonard E.....Ann Arbor
Hodges, Fred J.....Ann Arbor
Howard, S. C.....Ann Arbor
Inch, G. F.....Ypsilanti
Isaacs, Ralphael.....Ann Arbor
Jackson, Howard C.....Ann Arbor
Jimenez, Buenaventura.....Ann Arbor
Johnson, Lester J.....Ann Arbor
Johnson, V. C.....Ann Arbor
Johnston, F. D.....Ann Arbor
Kahn, Edgar A.....Ann Arbor
Kemper, J. W.....Ann Arbor
Kleinschmidt, Earl E.....Ann Arbor
Kleinschmidt, Gladys.....Ann Arbor
Kline, E. M.....Ann Arbor
Klingman, Theophil.....Ann Arbor
Knoll, Leo.....Ann Arbor
Kretschmar, N. R.....Ann Arbor
LaFever, Sidney L.....Ann Arbor
Langford, Theron S.....Ann Arbor
Law, John L.....Ann Arbor
Lathrop, F. D.....Ann Arbor
Lichty, Dorman E.....Ann Arbor
Lilly, Coral A.....Ann Arbor
MacKenzie, Aileen McQ.....Ypsilanti
Malcolm, Karl D.....Ann Arbor
Marshall, Mark.....Ann Arbor
Maxwell, J. H.....Ann Arbor
McEachern, Thomas H.....Ann Arbor
McGarvey, M. R.....Ann Arbor
Metzger, Ida.....Ypsilanti
Miller, Harold.....Saline
Miller, Norman F.....Ann Arbor
Muehlig, Geo. F.....Ann Arbor
Myers, Dean W.....Ann Arbor
Nesbit, Reed M.....Ann Arbor
Newburgh, L. H.....Ann Arbor
Oliphant, L. W.....Ann Arbor
Parnall, Christopher.....Ann Arbor
Paton, Thomas W.....Ypsilanti
Patterson, Ralph M.....Ann Arbor
Patton, Robert J.....Ann Arbor
Peck, Willis S.....Ann Arbor

Peet, Max.....Ann Arbor
Pillsbury, Charles B.....Ypsilanti
Peterson, Reuben (Emeritus).....
.....Duxbury, Mass.
Pollard, H. M.....Ann Arbor
Prout, Gordon H. J.....Saline
Ransom, Henry.....Ann Arbor
Raphael, Theophile.....Ann Arbor
Ratliiff, R. K.....Ann Arbor
Riecker, H. H.....Ann Arbor
Riggs, H. W.....Ann Arbor
Ross, Howard.....Ann Arbor
Sacks, Wilma.....Ann Arbor
Schnute, Louise F.....Ann Arbor
Schumacker, W. E.....Ann Arbor
Sheldon, John M.....Ann Arbor
Sink, Emory W.....Ann Arbor
Smalley, Marianna.....Ann Arbor
Smith, Donald S.....Ann Arbor
Smith, N. M.....Ann Arbor
Snow, Glenadine.....Ypsilanti
Snow, James S.....Ann Arbor
Solis, Jeanne C.....Ann Arbor
Steiner, L. G.....Ann Arbor
Stryker, Homer H.....Ann Arbor
Sturgis, Cyrus C.....Ann Arbor
Sundwall, John.....Ann Arbor
Teed, Reed Wallace.....Ann Arbor
Teitelbaum, Myer.....Ann Arbor
Thieme, M. Thurston.....Ann Arbor
Todd, Oliver E.....Ann Arbor
Tolan, Jack F.....Ann Arbor
Towsley, Harry A.....Ann Arbor
Vander Slice, David.....Ann Arbor
Wager, Spencer.....Ann Arbor
Waggoner, R. W.....Ann Arbor
Waldron, Fred R.....Ann Arbor
Wallace, J. B.....Saline
Wanstrom, Ruth.....Ann Arbor
Washburne, Charles L.....Ann Arbor
Wassell, G. K.....Ann Arbor
Weller, C. V.....Ann Arbor
Wessinger, J. A. (Emeritus).....
.....Ann Arbor
Wile, Udo J.....Ann Arbor
Wilson, Frank N.....Ann Arbor
Winslow, Sherwood B.....Ann Arbor
Wisdom, Inez.....Ann Arbor
Worth, M. H.....Ypsilanti
Wright, Wm. J.....Ypsilanti
Wylie, Wm. C.....Dexter
Yoder, O. R.....Ypsilanti

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Adler, Leopold.....Detroit
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Agnelly, E. J.....Detroit
Agnew, George H.....Detroit
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Aldrich, E. G.....Detroit
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Alford, E. S.....Detroit
Allen, C. I.....Detroit
Allen, R. B.....Detroit
Allison, Frank B.....Detroit

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Altshuler, S. S.....Detroit
Amberg, Emil.....Detroit
Ames, Chester C.....Detroit
Amolsch, Arthur L.....Detroit
Amos, Thomas G.....Detroit
Anderson, Bruce.....Detroit
Andries, J. H.....Detroit
Andries, R. C.....Detroit
Ankley, J. W.....Detroit
Anslow, Robert.....Detroit
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Appelman, H. B.....Detroit
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Ashe, S. R.....Detroit
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Asselin, J. L.....Detroit
Athay, Roland M.....Detroit
August, H. E.....Detroit
Babcock, Kenneth.....Detroit
Babcock, Myra.....Detroit
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Babcock, W. W.....Detroit
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Bacon, V. A.....Detroit
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Bloomer, Earl.....	Detroit	Clark, R. L.....	Detroit	Drolshagen, E. A.....	Detroit
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Boles, A. E.....	Detroit	Clarke, Niles A.....	Detroit	Drummond, Donald L.....	Detroit
Bovill, E. G.....	Detroit	Clarke, Norman E.....	Detroit	DuBois, Paul W.....	Detroit
Bowers, Leo J.....	Detroit	Clifford, Charles H.....	Detroit	Dubnove, Aaron.....	Detroit
Bowman, F. E.....	Detroit	Clifford, T. P.....	Detroit	Dubpernell, Karl.....	Detroit
Brachman, D. S.....	Detroit	Clinton, Wm. R.....	Detroit	Dubpernell, Martin S.....	Detroit
Bradfield, A.....	Detroit	Cobane, John.....	Detroit	Duffy, Edward A.....	Detroit
Bradshaw, Wm. H.....	Detroit	Cochrane, E. G.....	Detroit	Dundas, Edward M.....	Detroit
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Bramigk, Fritz W.....	Detroit	Cohoe, Don A.....	Detroit	Dunn, Cornelius E.....	Detroit
Brand, Benjamin.....	Detroit	Cole, Fred H.....	Detroit	Dupont, R. S.....	Detroit
Branch, H. E.....	Detroit	Cole, James E.....	Detroit	Dutchess, Charles E.....	Detroit
Braun, Lionel.....	Detroit	Cole, Wyman C. C.....	Detroit	Dwaihy, Paul.....	Detroit
Brennan, Thomas J.....	Detroit	Coleman, Margaret.....	Detroit	Dysarz, T. T.....	Detroit
Breon, Guy L.....	Detroit	Coleman, Wm. G.....	Detroit	Dziuba, John F.....	Detroit
Briegel, Walter A.....	Detroit	Coll, Howard R.....	Detroit	Eakins, F. J.....	Detroit
Brines, O. A.....	Detroit	Collins, A. N. (Emeritus).....	Detroit	Eaton, Crosby D.....	Detroit
Bromme, Wm.....	Detroit	Collins, E. F.....	Detroit	Eder, Joseph R.....	Detroit
Brooks, A. L.....	Detroit	Collins, M. R.....	Detroit	Edgar, R. G.....	Detroit
Brooks, Clark D.....	Detroit	Colvin, L. T.....	Detroit	Eisman, Clarence H.....	Detroit
Brosius, Wm. L.....	Detroit	Colyer, Raymond G.....	Detroit	Elvidge, R. J.....	Detroit
Broudo, Philip H.....	Detroit	Condit, Irving.....	Detroit	Ely, Lloyd L.....	Detroit
Brough, Glen A.....	Detroit	Connelly, B. L.....	Detroit	Emmert, H. C.....	Detroit
Brown, Harvey F.....	Detroit	Connelly, R. C.....	Detroit	Ensign, Dwight C.....	Detroit
Brown, Henry S.....	Detroit	Connolly, Frank O.....	Detroit	Ensing, Osborne.....	Detroit
Brown, Stanley H.....	Detroit	Connor, Guy L.....	Detroit	Erkfitz, A. W.....	Detroit
Brownell, Paul G.....	Detroit	Connors, J. J.....	Detroit	Eschbach, Joseph W.....	Detroit
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Falick, M. L.....	Detroit	Hall, A. C.....	Detroit	Jaffar, Donald J.....	Detroit
Fandrich, Theodore.....	Detroit	Hall, E. Walter.....	Detroit	Jaffe, Julius L.....	Detroit
Farbman, Aaron A.....	Detroit	Hall, Ralph E.....	Detroit	Jashman, Wm. E.....	Detroit
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Fenton, E. H.....	Detroit	Hamilton, William.....	Detroit	Jentgen, C. J.....	Detroit
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Fisher, O. O.....	Detroit	Hanna, E. H.....	Detroit	Johnson, Ralph K.....	Detroit
Fisher, R. L.....	Detroit	Hanna, S. C.....	Detroit	Johnson, R. M.....	Detroit
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Cohen, H. Herbert.....Eloise	Kemler, Walter I.....Ecorse	Shebasta, Bessy H.....Eloise
Coolidge, Maria Belle.....Grosse Pointe Park	Kern, W. H.....Garden City	Snow, L. W.....Northville
Craig, Henry R.....Eloise	Kernkamp, Ralph.....Eloise	Sparling, Harold I.....Northville
Dubin, Joseph J.....Dearborn	Klein, Louis.....Nutley, N. J.	Squires, W. H.....Eloise
Ely, Lloyd L.....Grosse Pointe	Knox, Ross M.....Ecorse	Stalker, Hugh.....Grosse Pointe
Engel, Earl H.....Wyandotte	Kwasiborski, S. A.....Wyandotte	Stellhorn, M. C.....Grosse Pointe
Erickson, Milton H.....Eloise	Lemmon, Clarence W.....River Rouge	Van Riper, Steven L.....Eloise
	Lescoheir, Alex W.....Grosse Pointe	Vincent, J. LeRoi.....Wayne
	Lewis, J. Hugh.....Wyandotte	Walker, Thaddeus.....Grosse Pointe
	Linton, James R.....Eloise	Wreggit, W. R.....Highland Park
	MacKenzie, John W.....Grosse Pointe	

Wexford County

Albi, R. W.....Lake City	Holm, Augustus.....Leroy	Mills, Robert E.....Boon
Brooks, G. W.....Tustin	Holm, Benton A.....Cadillac	Moore, G. P.....Cadillac
Carrow, J. F.....Marion	Hoverter, J. W.....Evart	Moore, S. C.....Cadillac
Doudna, H. E.....Albany, N. Y.	Laughbaum, T. R.....Lake City	Murphy, Michael R.....Cadillac
Gruber, John F.....Cadillac	McCall, J. H.....Lake City	Purdy, Calvin S.....Buckley
Hager, Ralph.....Manton	McManus, Edwin.....Mesick	Showalter, Laurence E.....Cadillac
Hendricks, H. V.....Kalkaska	Masselink, H. J.....McBain	Smith, Wallace J.....Cadillac

President's Page

EVERY PHYSICIAN A HEALTH OFFICER

MICHIGAN Medicine and the four thousand members of the Michigan State Medical Society are "on the spot" in their contention that treatment clinics are unnecessary in preventive medical procedures. Clearly, it is up to the physicians of this state to *prove* that the day of treatment clinics is past. Doctors must show Government, whether it be Federal, State or local, that they are able to do preventive medical work, and to handle the problems of syphilis control, tuberculosis control, immunization, and all phases of prevention as part of their own practices.

Government is showing a tendency to accept the medical profession's claim. The experiment of "Every Physician A Health Officer" is being tried out, now—at this very moment.

If the medical profession shows proof that it can handle this new field of work, in the practitioner's own office, then the program on the physician-patient basis will be continued and be enlarged.

If the profession does not rise to the occasion, if it throws away this splendid opportunity for greater service to the public, then it can expect to see "bigger and better" clinics, and will have no one to blame but itself for its own lethargy.

Men of Medicine, become *healthmen* in the modern field of preventive medicine.

Respectfully submitted,

Henry Cook

President, Michigan State Medical Society.

THE JOURNAL

OF THE

Michigan State Medical Society

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MAY, 1938

*"Every man owes some of his time to the up-
 building of the profession to which he belongs."*

—THEODORE ROOSEVELT.

EDITORIAL

SULFANILAMIDE

PERHAPS no other drug or medicinal agent has been written about and talked about to the same degree since its introduction less than three years ago, as sulfanilamide. Much as been claimed for it. It has been used to combat almost all kinds of infection with varying degrees of success. Like the proverbial two-edged sword, it has been found potent for harm as well as good. It is not a drug, by any means, for general consumption.

Elsewhere in this number of THE JOURNAL of the Michigan State Medical Society is an interesting presentation of the use of sulfanilamide in infections of the genito-urinary organs. This paper is submitted for publication by and we assume has the endorsement of the North Central Branch

of the American Urological Association. Doctors Breakey and Harrold have made a study of over 200 patients with infections of the upper urinary tract. The group consisted of ambulatory patients, for the most part not under institutional control, who may be considered as representing the patient who presents himself to the private practitioner. The group, two hundred and fourteen, to be exact (see classification, page 425), was studied with a view to ascertaining not only the beneficial effects, but any deleterious results as well. The authors have carefully tabulated the evidences of reaction to the drug. Adverse reactions subsided with the withdrawal of the medication, leaving no permanent untoward effects. Ten per cent of patients receiving sulfanilamide medication were found not to tolerate the drug well, with varying symptoms.

The authors of the paper, while recognizing the untoward symptoms possible, feel that sulfanilamide is very valuable in combating infections of the genito-urinary tract, particularly gonorrhea.

The reader's attention is called to the rather extensive bibliography. We purpose printing during the year a number of papers sponsored and approved by the North Central Branch of the American Urological Association which is represented by the Detroit Branch.

AMERICAN MEDICAL ASSOCIATION SURVEY

PERHAPS the majority of physicians are under the impression that medical care, for those who require it, is being adequately provided. A minority of physicians, among them those who are holding salaried positions, appear to think otherwise, and have so expressed themselves. The object of the survey conducted by the American Medical Association is to ascertain the truth of the matter. Is medical care adequate in the United States?

The agitation for change in the *modus* of medical practice has come for the most part from socially minded writers who have used up much space in lay magazines during the past few years. Little or no demand for change appears to have come from the people at large. Many, when questioned in regard to alleged state or socialized medicine, do not know what the questioner means.

Surveys are apt to be tintured by bias or

JOUR. M.S.M.S.

self interest. The social worker who has come into being of recent years is interested in making a place for himself in the scheme of things. It must not be denied, however, on the other hand that the doctor is also an interested person. We believe, however, that the doctor's long contact and association with not only the indigent sick, but with sick persons who are not indigent, places him in a better position to evaluate the needs of people than anyone more remote. The further fact that the doctor has been accustomed to render service gratis where needed should remove from him the reproach of being motivated by self interest. The traditions of his profession have acted as a sort of *noblesse oblige*.

The survey, the fact-finding part of it, is being left to the county medical society. This is about the only thing that can be done inasmuch as conditions vary with varying localities throughout the United States. Those chosen by county societies to aid in gathering facts will no doubt take the matter seriously, give it plenty of time, and approach the whole subject in a spirit of detachment, so that reliable data may be obtained. Various groups in the community are to be approached and given an opportunity to answer questions in their own language. The correlation of replies and the drawing of conclusions from factual data will be the function of the American Medical Association. The effect of this survey should be to let us know whether we are wrong or right in our impression in regard to the adequacy of medical care; for impressions they are, because no man can get beyond his immediate environment whether he is a general practitioner in the ranks, or a professor of medicine.

EDUCATION BY FORCE

THE *Pennsylvania Medical Journal* calls attention to the difficulties of doting mothers in getting their children to practice music lessons on the violin or piano. "A considerable number of physicians," comments the *Pennsylvania Medical Journal* editorially, "are asked by fond and doting mothers what suggestions they have to make the children practice music lessons on the violin or piano. Many children are not adapted for music, more especially where systematic practicing is concerned. Some parents stand over the child with a strap at each time of practice

and beat the child into submission. By the time the youngster is brought under control at each seance, both the parent and the child are wrecks, mentally and physically. This is one of those household problems that really give much concern to parents, many of whom will do anything to force their offspring to practice music lessons as part of their culture."

The *Pennsylvania Medical Journal* goes on to bolster its position by quoting remarks of a professional musician as follows:

"He'd be a real musician if he would only practice. He's made splendid progress considering his lack of practice.' Those words almost say themselves so often have the music teachers said them. 'Lack of interest' would mean the same thing and come nearer explaining the children's hatred of the practice hour.

"We all understand that few of the children learning how to play musical instruments are going to be musicians in the professional meaning of the term, but many of them could learn to play well enough to give pleasure to other people and provide spiritual repose and enjoyment for themselves.

"Playing an instrument is a way of freeing the spirit of the pressure of life. Everybody needs some such outlet, but children do not know what you are talking about when you tell them that.

"To those parents who make great sacrifices to buy pianos and violins and pay for lessons for children who cry and storm and run away at the mention of practice time, my word is, 'Don't. It isn't worth it.' To those whose children show plainly that they can play, but hate the discipline which learning demands, my word is, 'Go ahead.'"

We quite agree with the above musician; by all means, music, if a child takes to it readily. This will also apply to education in other fields. Unless a boy or girl likes school and really takes great satisfaction and enjoyment from it, it is almost time wasted to try to force an "education," for it is attempting the impossible. You may lead a boy to college, but you can't make him think.

CORPORATION PRACTICE OF MEDICINE

THE Medical Society of the District of Columbia has registered an objection to the practice of medicine by the Home Owner's Loan Corporation at Washington. The "Group Hospital Association" has been subsidized by a government gift of \$40,000 for the medical care of 6,000 HOLC employees who are being served by six salaried physicians, contrary to law, preventing the practice of medicine by a corporation. In retaliation to objections from the District of Columbia Medical Society and the American Medical Association, Congressman Scott of Cali-

fornia introduced a resolution into Congress on March 28, calling for an investigation into the acts of the American Medical Association, and state and county medical societies, as well as the Medical Society of the District of Columbia.

Further explanation of the situation is well voiced in an address before Congress by Congressman Paul W. Shafer of the third district of Michigan. Congressman Shafer's address is the clearest and most logical example of reasoning that we have read in a long time and it is hoped that every member of the Michigan State Medical Society will peruse this splendid exposition of the subject. It is hardly necessary to go into detail since we publish this address in this number of THE JOURNAL of the Michigan State Medical Society. Congressman Scott's resolution (H. Res. 452), if passed, will affect every practicing physician in the United States. There is no particular objection to investigations. They, however, should not be one-sided. Those who bring charges against organized medicine should also be subject to just as searching an investigation. A bill for investigation of anything, if not based upon fairness to all concerned, is no investigation at all.

So far as we know, there is no law permitting the practice of medicine by lay corporations hiring doctors to do professional work. There have been numerous attempts at such exploitation. However, they have never been sanctioned by law. A vigorous protest is being presented against the attempt being made on the part of the governmental agencies. If governmental agencies are permitted to practice medicine or dentistry, there seems no reason why any other lay group should not enter upon medical practice by hiring doctors to give the actual medical and surgical care which would in time call for advertising campaigns to stimulate business, for such it would become

THE BOTTLE HABIT

"Once again the annual report of the prescription-pricing department of the Lancashire Insurance Committee reveals the inordinate and growing belief of the panel patients of the county in the virtues of the medicine bottle. Twenty years ago, when the number of patients accounted for in the doctors' drug statistical data for the county was about half a million, the number of prescriptions issued was just under a million and a half. Last year some three-quarters of a million patients accounted for about four million prescriptions. The increase in the cost of drugs is even more startling. In 1917 it was

£39,679 (\$198,395), in 1937 it had risen to £137,969 (\$689,845). And if further proof be needed of Lancashire's insistence on having its medicine it is to be found in a column which shows that the average number of prescriptions per person insured has risen in twenty years from 2.91 to 5.24. It is a rate of increase much in excess of that for the country as a whole, and it is hard to account for."—*Manchester Guardian*.

Further comment on panel practice of medicine would be superfluous.

Customer—"You made a mistake in that prescription I gave my mother-in-law. Instead of quinine you used strychnine."

Druggist—"You don't say! Then you owe me 20 cents more."

Mrs. A.—"Jimmie has been in the third grade for two years. I wonder how he will ever get ahead?"

Mr. A.—"Don't know. If he wasn't born with one, he never will."

Boarder—We've had chicken four times this week.

Visitor—Four chickens! This must be a great boarding place!

Boarder—Oh, it was the same chicken.

SOWING AND REAPING

Oh, it may be no sae funny, this scheme o' sowin' debt

If it disna reap a harvest that will see th' bills a' met,

We'll no be hearin' eulogies, bit rather we'll be flayed

When inither generation pays th' debts that we hae made.

Oh! it's nae sae verra funny if yer doin' work that's free,

An' oor government officials drawin' doon their usual fee,

An' pilin' oop expenses, sae that nae man can earn Enough tae pay his taxes or his grocery concern.

We may better keep th' money for oor taxes tae oorsels

An' let th' politicians use th' land that they may seize

Tae cover their expenses, wi' not a penny more Unless they mak a profit an' show a balance o'er.

Dae ye think oor politicians wull hae' th' nerve tae face

Their sons' and daughters' bairns that may be aboot th' place,

An' tae luvie them an' tae kiss them an' tickle o' their feet,

When th' biggest thing they've gi'en them, a debt they canna meet?

Noo ah dinna do complainin' mair than any ither maun,

Bit ah'd like tae hae explained tae me th' basis o' th' plan

That pits mair money in yer pooch—oh, how ma hert does yearn

Tae ken that plan that saves ye money by spendin' mair'n ye earn.

WEELUM

JOUR. M.S.M.S.

DEPARTMENT OF SOCIETY ACTIVITY

L. FERNALD FOSTER, M.D., Secretary

THE A.M.A. SURVEY— YOUR OPPORTUNITY!

Objectives:

1. *Diagnosis.* To determine the prevailing medical and preventive medical needs in each county.
2. *Treatment.* To develop preferable procedure to supply the needs where medical and preventive services are insufficient or unavailable.

I. The first phase of the study is fact-finding.

II. The second phase of the study involves the analysis of factual data and the preparation of a report of appropriate methods to meet the needs if at present they are improperly supplied.

III. To insure the highest degree of accuracy and completeness, a sufficient amount of time must be taken on this study. Haste is inconsistent with good scientific and social investigations.

It must not be inferred that it is necessary for all county medical societies to recommend some new procedures. If from the study it appears that medical needs in the county are now being met satisfactorily, it is of as much importance to make a report to that effect as, in other instances, to recommend measures to correct insufficient or unavailable services.

"Every physician a health officer"

GOVERNOR MURPHY'S STATEMENT RE: SURVEY

THE State Welfare Department, the Michigan Department of Health and the Michigan State Medical Society have had frequent conferences relative to the medical needs of welfare, old age and W.P.A. clients.

MAY, 1938

Quite obviously there is need for additional medical care for many of these people. However, the extent of such needs, the inequalities in distribution of care, and the legal obstacles to providing additional and improved medical care are all subjects for intensive study in order that the problem may be properly solved.

The Michigan State Medical Society already is undertaking such a study. The State

of Michigan is desirous of offering its every assistance to the medical group in pursuing this survey. Therefore, I wish to announce the appointment of the following persons as members of a committee to coöperate with a committee ap-

pointed by the State Medical Society and all official and non-official state agencies and departments concerned with this important problem.

Dr. Don W. Gudakunst, State Commissioner of Health.
Mr. James Bryant, Director, State Welfare Department.
Mr. George F. Granger, State FERA.
Nelle Williams, Old Age Assistance Bureau, State Welfare Department.
Dr. Ralph Pino, Detroit.
Dr. Paul Kniskern, Medical Director, Kent County, FERA.
Dr. R. G. Tuck, Medical Director, Oakland County FERA.
Mr. A. N. Hennigar, Detroit Board of Education.
Mr. John Reid, Secretary, Michigan Federation of Labor.
Mr. R. A. Broadbent, Lansing, Michigan Pharmaceutical Assn.
U. G. Rickert, D.D.S., President, Michigan State Dental Society.
Mr. Charles Wennegar, Chrysler Corporation, Detroit.
Mr. Harry J. Kelley, American Seating Company, Grand Rapids.
Mr. Ray Baartz, Detroit Council of Social Agencies.

It is hoped that this committee can not only assist the Medical Society in discover-

ing the facts, but that ways and means can be outlined for the complete utilization of the professional and technical skills now existing in our state for the benefit of our people.

April 6, 1938.

"All medical progress begins with **you**."

M.S.M.S. OBJECTIVES AND ACTIVITIES

II. ECONOMIC:

The Michigan State Medical Society and its component county societies bring you these valuable benefits of membership:

1. Participation in the varied activities of the county and state medical societies—all designed to preserve the physician-patient relationship.
2. Protection against state and national legislation inimical to public interests and advancement of medical science; constructive efforts to initiate beneficial health measures; important contacts to effect the proper administration of existing laws.
3. Defense of your profession and your source of livelihood from encroachments from without.
4. The bulwark of an organized profession in medical-legal matters.
5. Information and action on fraudulent schemes, inferior products, and pseudo-medical practitioners through close coöperation with the State Department of Health, the State Board of Registration in Medicine, and other departments at your State Capitol.
6. Privilege of becoming an active member of the Michigan Health League.
7. Assistance in obtaining appointments as examiner for insurance companies, state departments, and other organizations.
8. Personal service of your Executive Office in Lansing in matters associated with your practice of medicine.

"Every physician a health officer"

UNHEALTHY POLITICALIZATION OF MEDICINE

SENATOR Wagner of New York recently introduced in the United States Senate a resolution providing for the appointment

of a select committee of the Senate to conduct an investigation of medical service in the United States; this appears to be a preliminary to a socialized medicine bill which Mr. Wagner has threatened to introduce.

Is Senator Wagner trying to intimidate individual members or groups of physicians to stop fighting against a corporation illegally practicing medicine? Is Senator Wagner et al. attempting to develop a defeatist attitude in the medical profession in order "to divide, and rule"?

Will the Wagner bill, if enacted into law, divide the medical profession as has his N.L.R. Act (designed to *help* labor, not divide it!)? The N.L.R.B. has been dissolving A. F. of L. contracts and ordering new elections in ways that keep the A. F. of L. constantly irritated and more and more averse to an agreement with the C.I.O.

If Senator Wagner's political panaceas cannot work in the economic field, what chance for success (benefit to the people) will they have in the more highly personal field of medicine?

Political meddling in medicine is always disillusioning, if not disastrous, to the people. A physician's responsibility is, first, to warn his patients against the dangers of political medicine; second, to fight in the front-line trenches against any scheme which will deteriorate medical care in this country.

"All medical progress begins with **you**."



JOUR. M.S.M.S.

EXECUTIVE COMMITTEE OF THE COUNCIL

March 13, 1938

HIGHLIGHTS:

1. Governor Murphy offers help to the Michigan State Medical Society in the work of the A.M.A. Survey.
2. Right of employes of state penal institutions to choose their own physicians is reaffirmed and demanded.
3. Request is made for amplification of Attorney General's opinion re interpretation of x-ray plates.
4. The Filter System is made official by the Michigan Crippled Children Commission.
5. The State Society's representatives to the Michigan Health League are appointed.
6. The Gudakunst-Salter series of articles on "Health Factors of Middle Age" are approved for publication in newspapers of the state.
7. Fifty eminent speakers, on annual meeting program in Detroit, September 20, 21, 22, 1938, are approved.

1. *Roll Call.*—The meeting was called to order in the Statler Hotel, Detroit, by Dr. P. R. Urmston at 3:15 P. M. Those present: Drs. Urmston A. S. Brunk, H. R. Carstens, I. W. Greene, P. A. Riley. Also present: Drs. Henry Cook, H. A. Luce, L. Fernald Foster, J. H. Dempster, M. H. Hoffmann, R. H. Holmes, L. G. Christian, L. O. Geib, R. H. Pino, G. C. Penberthy, Health Commissioner Don W. Gudakunst, Drs. C. K. Hasley and H. B. Fenech, and Executive Secretary Wm. J. Burns. Absent: Dr. V. M. Moore.

2. *Minutes.*—The minutes of the meeting of February 9 were read and approved.

3. *Financial Report.*—The financial report for February, 1938, was presented, accepted and ordered placed on file. Bills Payable were presented, and ordered paid on motion of Drs. Carstens-Greene. Carried unanimously.

4. *Report of Contact Committee to Governmental Agencies.*—Drs. Cook and Urmston reported on conferences with Crippled Children Commission on February 15 and March 2 in Lansing. A full discussion ensued relative to the various points, and in particular the filter system.

Recent action of the Commission: An executive order making the filter system official was being considered by the commission.

The Executive Secretary reported on the radiological schedule as presented to the Crippled Children Commission by the Michigan Association of Roentgenologists.

5. *A.M.A. Survey.*—This matter was discussed, and Health Commissioner Gudakunst stated that the Governor would offer help in the study, to survey wards of the state, and reported that the study committee would be composed of representatives of the MSMS, medical directors of the E.R.A., social agencies, Welfare Department, State Health Department, Education, large and small Industry and Labor. Dr. Foster explained the details of the A.M.A. survey, to be medically conducted. Motion of Drs. Greene-Brunk that the Michigan State Medical Society make the official survey as suggested by the American Medical Association. Carried unanimously.

After further discussion, motion was made by Drs. Carstens-Greene that the MSMS Public Relations Committee be instructed to stimulate all necessary study, interpretation and activity on the part of the county medical society. Carried unanimously.

Motion of Drs. Brunk-Carstens that State Health Commissioner Gudakunst be advised that

we wish to contact the Governor re the survey of wards of the state; that the Contact Committee to Governmental Agencies has authority to so contact the Governor and the State Health Commissioner, and to report back to the Executive Committee of The Council. Carried unanimously.

6. *Attorney General's Opinion re Interpretation of X-Ray Plates.*—This matter was presented by Dr. C. K. Hasley for the Michigan Association of Roentgenologists. The matter was thoroughly discussed, and Drs. Dempster and Hasley were requested to draft a letter for presentation to Attorney General Starr.

The letter, as drafted, was presented to the Executive Committee of The Council and approved, with instructions that it be sent to Attorney General Starr, on motion of Drs. Riley-Brunk. Carried unanimously.

7. *Report of Legislative Committee.*—Dr. L. G. Christian, Chairman, reported on the recent meeting of the Legislative Committee. Motion of Drs. Carstens-Riley that the Legislative report be accepted. Carried unanimously.

8. *Investigations of Violations of Medical Practice Acts.*—A report on this matter was presented, and accepted.

9. *Syphilis Control Bill in Congress.*—President Cook reported on this matter, and on his letter to Senator Vandenberg urging that a conservative but ample appropriation should be considered; he read Senator Vandenberg's reply, suggesting that a 3-year appropriation, to give the experiment time to prove itself, was sufficient.

10. *Michigan Society for Mental Hygiene.*—President Cook spoke of the meeting of April 8, which was thoroughly discussed. No action taken.

11. *Civil Service Commission.*—The matter of the Civil Service Commission's proposed examination of prospective state employes, by which physicians in penal institutions might be required, according to the instruction sheet, to furnish medical care to prison employes, was discussed. Motion of Drs. Carstens-Brunk that a letter be written to the Civil Service Commission reaffirming the position of the MSMS that physicians employed by penal institutions shall not furnish medical service to employes, thereby depriving these citizens of the right of choosing their own physician. Carried unanimously.

12. *Parole Commission.*—Dr. Riley, as Chairman of the Contact Committee with Parole Commission, reported that his committee had transmitted its decisions re consultation service and fees there-

SOCIETY ACTIVITY

for to the Parole Commission; the Parole Commission had discussed this matter in Jackson on January 25 and had referred the matter to the Civil Service Commission. Motion of Drs. Brunk-Carstens that the report be accepted. Carried unanimously.

13. *Committee on Scientific Work.*—Dr. Foster reported on the February 20 meeting of this committee. He stated that the 1938 annual meeting would begin as usual with a House of Delegates' Breakfast, and continue with many activities and fifty speakers until Thursday afternoon at 5:00 p. m., September 22, 1938. The suggestion that the Ear, Nose and Throat section have a section meeting all day Wednesday was not looked upon favorably by the Executive Committee of the Council.

Motion of Drs. Carstens-Brunk that the report of the Committee on Scientific Work be accepted, including its recommendation that only one-half day (Wednesday, September 21) be devoted to section meetings. Carried unanimously.

14. *Michigan Health League.*—Dr. Christian reported on the formation of the League and the approval of its Constitution and By-Laws, which was referred back to the Executive Committee of the Council of the M.S.M.S. for its approval. Motion of Drs. Carstens-Brunk that a copy of the constitution of the League be sent to each member of the Executive Committee, with the request that he study same, write his comments to Chairman Urmston and Secretary Foster, who shall combine the various suggestions, with power to act. Carried unanimously. Motion of Drs. Carstens-Greene that the M.S.M.S. contribute its contribution of \$50.00 to the Michigan Health League, at this time. Carried unanimously.

Motion of Drs. Greene-Riley that the present nominations to the Health League (Drs. Christian, Gruber, Tuck) be approved by the Executive Committee of the Council. Carried unanimously.

Motion of Drs. Riley-Brunk that the three representatives of the Michigan State Medical Society to the Health League use their influence to see that the M.S.M.S. Legislative Committee Chairman be made a member of the Executive Committee of the League. Carried unanimously.

15. *Report of Medico-Legal Committee.*—The monthly report, as presented by Secretary Wm. J. Stapleton, Jr., was read, and accepted on motion of Drs. Brunk-Carstens. Carried unanimously.

Dr. Carstens spoke of the report of the Secretaries' Conference held at the A.M.A. in Chicago last

November re what other states are doing in medico-legal work. Motion of Drs. Carstens-Greene that this be referred to a committee for study and report. Carried unanimously.

Committee appointed: Drs. Greene, Holmes, Andrews.

16. *Title "Dr." Used by Chiropractors.*—A recent opinion of the Attorney General denying chiropractors the right to practice medicine or use the title "Doctor" was read.
17. *Report of Cancer Committee.*—Report of the meeting of March 12 was presented, received, and placed on file. It was suggested that the doctor's small leaflet re cancer might be published in the JOURNAL, to save expense.
18. *Northwest Conference.*—President Cook and Secretary Foster reported on the meeting of the Northwest Conference in Chicago on February 13. Dr. Foster suggested improvements in the form of organization of this association. Motion of Drs. Carstens-Brunk that the Secretary's suggestion meets with the approval of the Executive Committee of The Council. Carried unanimously.
19. *Postgraduate Courses.*—Secretary Foster reported on the individual postgraduate courses in obstetrics, which the State Department of Health is trying to arrange at the present time.
20. *From the Wayne County Medical Society.*—(a) Suggestion to discontinue o.p.d. fees under the Afflicted Child Act. This was discussed, and the Executive Committee instructed the Executive Secretary to ask for specific and detailed information from the Wayne County Medical Society, in order that it may proceed with any necessary investigation.
(b) That the state help to remove 3,000 state mental cases from Eloise Hospital to make room for Wayne County Medical cases now housed inadequately in Receiving Hospital, Detroit. This was discussed generally, and the Executive Committee deplored the present conditions. However, the Governor is gradually relieving the situation, as more room is being made at Ypsilanti.
21. *"Health Factors of Middle Age."*—The Executive Committee discussed the reprinting of this series of articles, written by Dr. D. W. Gudakunst and Lawrence C. Salter, for all the small newspapers of the state, under the sponsorship of the M.S.M.S., the State Department of Health, and the Joint Committee on Health Education. Motion of Drs. Brunk-Riley that this be approved. Carried unanimously.
22. *Adjournment.*—The meeting was adjourned at 11:25 p. m.

SEE STARS—HEAR STARS—SEPTEMBER MEETING

A constellation of medical stars will make brilliant the 1938 annual meeting of the Michigan State Medical Society, in Detroit, September 20, 21, 22. Twenty-seven guest speakers from all parts of the country and abroad will be featured on the General Assemblies; a like number of Michigan teachers and lecturers will be presented on the section programs. Among the acceptances of out-of-state speakers, to date, are:

C. A. Aldrich, M.D., Winnetka, Ill.
Joseph Baer, M.D., Chicago, Ill.
O. B. Batson, M.D., Philadelphia, Pa.
Henry A. Christian, M.D., Boston, Mass.
Franklin G. Ebaugh, M.D., Denver, Colo.
Haven Emerson, M.D., New York, N. Y.
Morris Fishbein, M.D., Chicago, Ill.
Howard Fox, M.D., New York, N. Y.
John Gordon, M.D., Boston, Mass.
Roy R. Grinker, M.D., Chicago, Ill.

Henry F. Helmholtz, M.D., Rochester, Minn.
Harold O. Jones, M.D., Chicago, Ill.
Frank H. Lahey, M.D., Boston, Mass.
William D. McNally, M.D., Chicago, Ill.
F. W. Rankin, M.D., Lexington, Ky.
A. D. Ruedemann, M.D., Cleveland, Ohio
Kellogg Speed, M.D., Chicago, Ill.
Fred Taussig, M.D., St. Louis, Mo.
A. F. Voshell, M.D., Baltimore, Md.

CONGRESSMAN SHAFER (MICH.) FIGHTS SOCIALIZED MEDICINE

*[The following address was made by Congressman Paul W. Shafer of Battle Creek, Michigan, in the U. S. House of Representatives, Washington, D. C., on March 29, 1938]**

A resolution has been introduced in the Congress—Monday, March 28—by the gentleman from California [Mr. Scott] calling for an investigation into the activities of the American Medical Association, State and county societies, and the District of Columbia Medical Society.

This resolution is the outgrowth of a controversy between the Group Health Association—originated to provide medical care for employees of the Home Owners' Loan Corporation—and the Medical Society of the District of Columbia.

In connection with this controversy, the gentleman from California has made several serious charges on the floor of this House which have been given wide publicity. These include charges of unethical practice by members of the District of Columbia Medical Society and the accusation that members of the society are conspiring to create a monopoly of the practice of medicine, on their own terms, in Washington hospitals. My interest in the controversy is explained by the fact that I am a member of the Subcommittee on Hospitals and Charities of the Committee of the District of Columbia, and inasmuch as these charges involve hospitals in the District of Columbia, I have felt it my duty to investigate the accusations. I have made a cursory investigation on my own initiative and I take the floor today to advise the membership of my findings.

I might observe at this point that the results of my personal inquiry show that if an investigation resolution is adopted, it should also provide for an investigation of the G. H. A.—Group Health Association—as well as the Medical Society. In fact, if the resolution presented by the gentleman from California is adopted without including the G. H. A. in the investigation, I shall introduce a similar resolution to bring the G. H. A. under the scope of the investigation.

From my findings I have no doubt but that an investigation into the activities of the Medical Society of the District of Columbia would vindicate that organization and its members of unethical conduct. In fact, I have learned that the members of the District of Columbia Medical Society are as anxious that this investigation be held as its proponents, in order that the loose accusations, and the implanting in the public mind of doubts as to the high morals and ethics of the members of the society, may be disproved.

In connection with his resolution the gentleman from California made the statement that—

The District Medical Society is doing everything it can to break up the G. H. A. movement and is receiving assistance from the American Medical Association.

The fact is, the Medical Society has done nothing of the sort. When the G. H. A. was originally organized to provide adequate medical care for employees of the H. O. L. C. and other Government employees, the District Medical Society offered its cooperation to help provide this medical care. The offer was made in good faith, with but one proviso, that being that the program to be worked out could not violate the legal, ethical, and professional standards of the society.

*Acknowledgment is made to the *Congressional Record* for permission to reprint this address, which is exempt from the copyright provisions of the M.S.M.S. JOURNAL.

"Medical Ethics" Defined

By way of explanation I might state that these standards of the Medical Society were not conjured overnight by any group of laymen. They are self-imposed limitations upon the medical profession for the protection of the public, built up as a result of practical and costly experiences over three centuries of medical practice.

The G. H. A., however, insisted that the society provide medical service for this organization on G. H. A.'s own terms, which the medical society found impossible. If the G. H. A. felt those standards were correct, and the medical society was wrong, it certainly had the right to insist upon them; but, by the same token, the medical society hardly could be expected to abandon its own principles in order to comply with the ultimatum of the G. H. A.

The points in conflict were:

First. That the program must be legal.

Second. That it must be economically sound, so that the quality of service rendered could not be sacrificed in order to render the service at a reduced rate.

As to the economical soundness of this program these facts should be noted:

Quality Service Suffers

In any program of this kind the primary purpose is to render medical service at a reduced cost. The objective is to give the individual the same amount of medical care that is received by persons of comfortable circumstances but at a reduced rate. In order to do that a sacrifice has to be made in one of two places. Either the physician who handles this type of work must receive less income or his income must be made up by a larger number of patients, which means less time and less attention to each individual.

The fallacy of the Group Health Association program is that all of this sacrifice for 6,000 members is concentrated on six physicians. In order to pay the salaries of the six doctors it has been necessary to admit more and more members to the association and to cut down heavily on the amount of time and attention available for each patient.

Had this program provided for free choice of physician, the sacrifice would have been spread over hundreds of physicians in the city of Washington. (A total of 1,979 physicians.) Each one could have afforded to handle his share of this practice at a reduced rate and still give the usual time and attention to the patient.

For six physicians to purport to give complete and unlimited medical attention to 6,000 individuals—a thousand persons for every doctor—is plainly impossible. Actual results show that. Just as the past experience of the medical society indicated, the physicians of Group Health Association have been more and more overburdened with work. There are many cases having to wait for long periods before receiving attention.

Illegal Practice by a Corporation

As to the legal phase:

A government gift of \$40,000, necessary in order for G. H. A. to begin operations at all, was held by the Comptroller General and the House Appropriations Committee to have been illegal and improper.

The Healing Arts Act of the District of Columbia makes it unlawful for any corporation to practice medicine. There are many reasons for this, but, regardless of the reasons, the law is on the books. The medical society received a formal legal opinion from its counsel that Group Health Association is a corporation engaged in the practice of medicine in violation of the healing-arts law.

SOCIETY ACTIVITY

The United States district attorney here also has ruled the same way.

The corporation counsel has ruled that Group Health Association is operating in violation of the insurance laws of the District of Columbia. Group Health Association has requested a declaratory judgment from the local courts on those two points in the hope of overruling these adverse decisions, but so far such judgments have not been handed down.

One of the requirements for membership in the medical society of the District of Columbia is that the physician must be engaged in legal practice of medicine. The same eligibility requirement is maintained by all hospitals in the District of Columbia. Plainly, such a requirement is necessary. The District Medical Society has no more right to permit a physician of Group Health Association to be a member of the society in good standing under these rulings than it would have to permit some physician who is guilty of criminal practice to retain his membership. The hospitals are in an identical position.

Group Health Association Physicians Engaged in Illegal Practice

In short, the physicians of Group Health Association are engaged in illegal practice, and the hospitals or the Medical Society would be compounding this violation of law by having professional relationships with these physicians.

Among the many reasons why corporation practice of medicine is held to be inimical to the public interest is the fact that any such corporation set up for commercial marketing of medical service tends to wipe out the fundamental essential of good medical care—the personal attention and interest by the physician to the individual patient.

If medicine were a completed science in which symptoms could be dialed into a computing machine—a crank turned—and a box of the proper pills discharged from a slot, the considerations might be different. This, however, is not the case. Medicine is only an infant science. The eccentricities, peculiarities, and individual factors in human beings make every diagnosis and treatment dependent very heavily on personal deduction, allowances for this and that, and careful reasoning by the physician.

Disastrous Results to Public

Another objection to the corporation practice of medicine is that where medical service becomes a medium of profit by a corporation with lay stockholders interested primarily in whether the corporation pays dividends or not, the results to the public are disastrous.

In this connection, fancy the outcome if several large corporations were set up in the District of Columbia to sell medical care to the public. In commercial competition with each other, their objective would be to compete for membership and to get as many paying members as possible to increase the total of business. It is not inconceivable that door-to-door solicitors might be calling upon housewives like Fuller Brush salesmen, to sell memberships. With salesmanship their only interest, the method of sale, of course, would be to build up fear in the individual's mind and thereby show the value of this service. It is a physical fact that such a practice as this probably would have dire effects on the general public welfare. Fear, imagination, and similar emotions are closely tied to the physical health of any individual.

The present controversy was begun by the Group Health Association when one of its members was refused admittance to a district hospital (Garfield) when it was ascertained by hospital authorities that

emergency surgery was not needed. The patient later underwent an operation at another hospital (Columbia).

Speaking on the floor of the House, the gentleman from California [Mr. Scott] made the following statement:

A certain woman is a secretary in one of the Government departments. She belongs to the Group Health Association. She went to the hospital, being sent there after examination by a physician employed by the Group Health Association. He sent her to the hospital with a diagnosis of appendicitis. The doctor who sent her there was Dr. Selders of the Group Health Association clinic. She was admitted to the hospital and made ready for the operation. Doctors and attendant nurses had dressed themselves in preparation for the operation and morphine was administered to her by an employee of the hospital, and then the question was raised by the resident physician whether or not Dr. Selders was to be permitted to operate on this young woman. The resident physician said, "No; he is employed by the Group Health Association and cannot operate in this hospital."

The young woman refused to accept any other doctor and said, "Dr. Selders has taken care of me. He knows my condition and I want him to operate on me because I have confidence in him."

They would not allow this, and thereupon the superintendent of the hospital refused to allow the operation to proceed. The resident physician, without consultation with other medical authorities, declared the case was not an emergency case, going on record to that effect in writing, and the girl was taken out of the hospital. This despite the fact that G. H. A. patients are let into hospitals only in emergency cases, and even then not all the hospitals will take emergency cases.

Forty-eight hours later the young woman was operated upon by another physician in another hospital, and it was found at that time her appendix had ruptured. The resident physician in the first hospital would not let her be operated upon because she wanted her own doctor, said it was not an emergency case, and sent her out of the hospital after an employee of the hospital itself had injected morphine into her in preparation for the operation. What might have happened did not happen, because she lived. The operation was successful. (Pp. 5135, 5136, *Congressional Record*.)

My personal investigation shows that the circumstances stated in connection with this case are not based on fact. The patient never entered the operating room at the hospital. Dr. Selders knew in advance that the only grounds under which he might be accorded surgical privileges at this hospital—Garfield—was for emergency surgery. He took the patient to the hospital and claimed she was suffering from acute appendicitis and that an emergency operation was necessary. Documentary evidence shows that the patient was examined by the hospital physicians who found she did not have an acute appendix, and that an emergency operation was not necessary. They refused to permit the operation but offered to call any surgeon the patient might request. The patient did insist upon Dr. Selder's performing the operation and finally left the hospital. Two days later she was operated upon at another hospital—Columbia—by a recognized physician of that hospital's staff.

Documentary evidence from the surgeon who performed the operation and from the pathologist who examined the appendix shows that the appendix had not ruptured and that the patient did not have acute appendicitis. I have here an attested copy of a letter written by Truman Abbe, M.D., the surgeon who performed the operation, addressed to Dr. Thomas E. Neill, President of the Medical Society of the District of Columbia. The letter reads:

DEAR DR. NEILL: In response to your request for information about the condition of the appendix from the patient of the G. H. A. upon whom I operated on March 1, 1938, I have asked her permission to report to you (for public information, if necessary) that I found no acute condition in the abdomen, and that the pathologist's report on the appendix was "chronic appendicitis."

Sincerely yours,

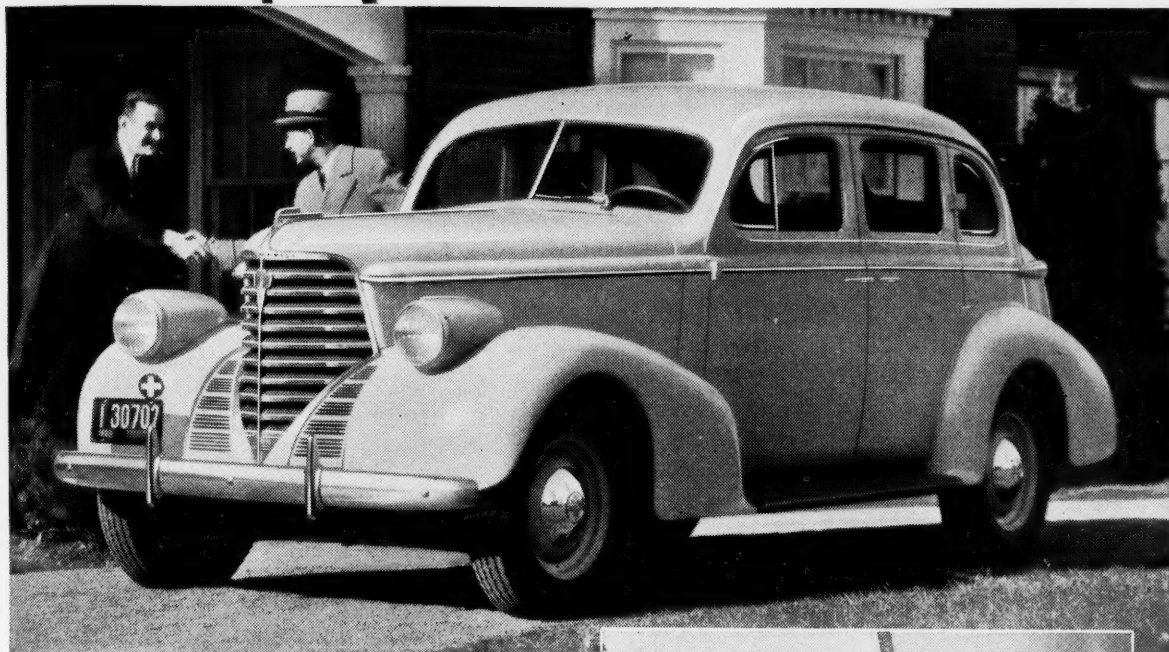
TRUMAN ABBE.

In view of these facts, it would appear that Dr. Selders, the G.H.A. physician was guilty of one of two things in this case. Either he was woefully mis-

(Continued on Page 456)

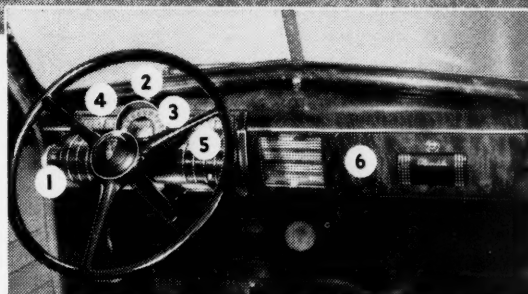


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(Continued from Page 454)

taken in his diagnosis of the woman's illness, or he deliberately attempted to force his way into the hospital under false pretenses.

If it was an honest mistake, it seems to indicate that the hospitals of the city of Washington are justified in refusing him permission to operate on the grounds of professional capability, as well as on the grounds that he is engaged in illegal practice. If it was a case of false pretenses, it is a sad reflection on the ethics and integrity of Dr. Selders and the G.H.A., that any patient should be deliberately subjected to the mental stress here involved and used as a tool of trickery.

In accusations of this kind it is better to have the facts established immediately than to allow the medical profession to be exposed to such loose charges. I have no doubt that an investigation would vindicate members of the District of Columbia Medical Society completely and for that reason I would support the resolution of the gentleman from California if it were not national in scope. I regard this controversy as a purely local situation, as I stated before, and I see no reason for extending this proposed inquiry beyond the borders of the District. I am at all times ready to favor an investigation into charges against the medical profession or any of its reputable members because I believe that, except perhaps in isolated cases, such charges are idle gossip which would be disproved by an orderly investigation, and because I believe the medical profession is too important, its ideals are too fine, its service to humanity is too great, and its necessity to human welfare is too vital to allow it to be rendered suspect. I believe the members of the District of Columbia Medical Society, whose conduct has been brought into question, should be given a full opportunity to establish, in an orderly and convincing way, the falsity of these charges.

COUNCIL AND COMMITTEE MEETINGS

1. Thursday, March 24, 1938—Mental Hygiene Committee—Eloise Hospital, Eloise—7:30 p. m.
2. Saturday, April 2, 1938—Medico-Legal Committee—David Whitney Building, Detroit—12:00 noon.
3. Wednesday, April 13, 1938—Liaison Committee with Hospital Association—Wayne County Medical Society Building, Detroit—4:00 p. m.
4. Thursday, April 14, 1938—Executive Committee of The Council—State Health Department Laboratories, Lansing—2:00 p. m.
5. Wednesday, April 20, 1938—Committee on Postgraduate Medical Education—Wayne County Medical Society Building, Detroit—2:00 p. m.
6. Thursday, May 5, 1938—Advisory Committee to Woman's Auxiliary—Hotel Olds, Lansing—6:00 p. m.
7. Wednesday, May 18, 1938—Executive Committee of The Council, Liaison Committee with Hospital Association, and Trustees of Mich. Hospital Association—Eloise Hospital, Eloise—2:00 p. m.

What County Medical Societies Are Doing

JACKSON'S SYPHILIS CONTROL PROGRAM

By EDWARD D. CROWLEY, M.D., Jackson

THE Jackson Academy of Medicine and Dentistry has a contract with the Board of Supervisors of Jackson County to supply medical care to indigent patients in the venereal disease group for a stipulated sum. Patients can go to the physician of their own choice, and adequate treatment is guaranteed.

Treatment is followed according to the specifications laid down by the Michigan Department of Health.

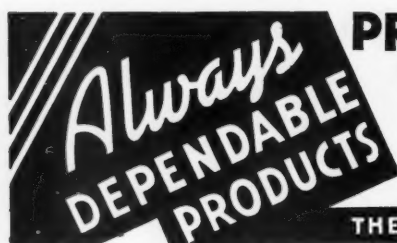
The routine that is carried out in Jackson County is as follows: When a positive Kahn or G. C. smear is obtained on an indigent case, this case is referred to our Poor Commissioner so that he will guarantee that the case is really indigent. After this approval is obtained, the patient returns the card, signed by the Poor Commissioner, to the doctor, who in turn reports the case to the secretary of the Academy. Treatment is then started, and each treatment is recorded by the physician on a special chart. After two months these treatment charts are returned to the secretary of the Academy; in this manner careful check is made that the treatment is being adequately carried out. This chart is signed by the patient, as well as by the M.D. If a case is delinquent two treatments, another card is sent to the secretary, who in turn reports to the Board of Health, and this case is immediately followed up and requested to return to his physician for treatment. Kahns are required four times a year, and gonorrhea smears must conform to the State regulations before a case of gonorrhea is discharged.

We find that this type of follow-up of cases is very effective in having these patients continue their treatments. It is working very satisfactorily in Jackson. We have splendid coöperation from the Board of Health, and this is what makes the plan effective.

The contract that we have with the Supervisors pays the physician approximately \$50.00 a year for the treatment of syphilis, and \$30.00 for the treatment of gonorrhea. The fee that is paid to the physician for these cases is, on a sliding scale, according to treatment given. All medication is furnished free by the State.

This program maintains the physician-patient contact, where before these patients were treated in the clinics.

Any questions in regard to a more detailed operation of our plan will be gladly answered by corresponding with the secretary.



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President—Mrs. G. C. Hicks, 1009 Wildwood Ave., Jackson, Michigan
Sec.-Treas.—Mrs. J. W. Page, 119 N. Wisner St., Jackson, Michigan
Press—Mrs. C. B. Fulkerson, 1535 Grand Ave., Kalamazoo, Michigan

A MESSAGE FROM THE PRESIDENT

As each Auxiliary is planning to close the program for the year, the days are full of duties for all lest we be not able to enjoy the recess so near at hand.

Mrs. Page and I have enjoyed the courtesies extended to us as we have accepted invitations to attend meetings. Of course Bay County came first, then Ingham County, January 24, where we heard Dr. Clara Davis, speak of her conclusive ideas regarding food for children and the psychological influence of the day in character building. It was a real pleasure to chat with Dr. Davis, Mrs. Vanderzalm and other members at tea.

On March 25 we were in Saginaw accompanied by Mrs. Peterson as house guests of Mrs. L. C. Harvie at her lovely new home attending the joint meeting of Bay and Saginaw Counties. A delightful program was planned and I can recommend Miss O'Brien, Dr. O'Brien's daughter, as a speaker on "What is New to Read," also Mrs. Hutchinson and her beautiful selection on the harp. Then to Lapeer for dinner, and to organize that night.

On April 8 at the Wayne County Meeting to make plans for the State meeting with Mrs. A. O. Brown, convention chairman, and Mrs. Bookmeyer, co-chairman, also Mrs. Whitney and Mrs. Geib. We were fascinated by the profusion of flowers and the gorgeous arrangement of bouquets following the talk on "Gardens and Health" by Professor Paul R. Krome of the Michigan State College, and then a cup of tea.

On April 13 we met Dr. Collisi, Advisory Council chairman, to discuss matters of business and plans for the convention, and attended Kent County's program at Mrs. Leon DeVel's home, after which we were refreshed with a cup of tea before leaving for home.

On April 22 I am happy and proud to announce Washtenaw County organized at a luncheon meeting held at the League.

This county with Lapeer and Fremont will add greatly to our membership and strengthen our State Auxiliary. Thanks to organization Chairman, Mrs. Henry Pyle, and those who preceded her, also the County Medical Societies for their interest.

On May 3 we join the guests of the Calhoun County Auxiliary for luncheon at the Country Club in Battle Creek.

I am happy to share the memories and anticipation of these meetings with you as members of the Auxiliary.

With the usual promptness of the board members in submitting reports for the year, I am sure to have my state report to Mrs. Keck on time, and then complete arrangements to be your delegate at the national meeting in San Francisco from June 13 to 17.

May I urge all doctors' wives in the state to plan to attend the state meeting, as all general sessions are open. Our program will be announced in the July issue of THE JOURNAL.

I will include the article to be printed in supplement to the *California State Journal* as a courtesy for delegates to the national meeting. I could not include all activities of all auxiliaries so selected and placed those which might be of most value to other states. I hope you will approve.

The Nominating Committee has been appointed as follows: Mrs. L. C. Harvie, Chairman, Mrs. E. S. Peterson, and Mrs. Ledru Geib.

If you have names for new officers, please send them to Mrs. Harvie.

MRS. G. C. HICKS,
President Woman's Auxiliary.

Ingham County

The Woman's Auxiliary gave a dessert bridge in March at the home of Mrs. T. I. Bauer, Wildwood Drive, East Lansing. A St. Patrick's Day motif was carried out in decorations of spring flowers and tapers. Four prizes were won, and a door prize and traveling prize were also presented. The committee in charge was Mrs. R. E. Loree, Mrs. William Cameron, Mrs. Fred Huntley and Mrs. H. A. Miller.

MRS. P. C. STRAUSS,
Press Chairman.

Eaton County

After the regular March business meeting of the Auxiliary, Miss Cooper and Miss Cox, nurses from the W. K. Kellogg Foundation, were introduced. Miss Cooper gave a very interesting and instructive talk on the work that will be done by the Eaton County Nursing Clinic. She explained that it will be an out-patient service from the Hayes-Green Hospital obtainable by anyone through his own doctor. The service will be in operation after April 15.

Members of the Auxiliary brought gifts for a layette which were very gratefully received by the nurses. The project started by the Auxiliary of giving to the Nursing Clinic will be continued each month.

Wayne County

On January 12, the Woman's Auxiliary sponsored a "Bring Your Husband Dinner" at the Wardell Hotel. The revival of this dinner met with hearty response as there were one hundred and fifty present. We were most fortunate in having as our honored guest speaker, Mrs. Augustus S. Kech, president of the American Medical Association Auxiliary.

The regular January meeting was held on Friday, January 14, at the medical society headquarters. Dr. Milton Simpson, Professor of Literature at Kalamazoo College, spoke on "The Relation of the Physician to Literature," and referred to the many literary books written by doctors and about doctors. Following the program, tea was served. In February, our social chairman, Mrs. Galen B. Ohmart, and our program chairman, Mrs. Alexander Cruikshank, arranged a luncheon and musicale at the Colony Town Club. Our Ways and Means Committee, Mrs. Richard B. Connelly, chairman, arranged a Floral Bridge Tea on February 18, to raise funds to supply all the Wayne County Schools with *Hygeia*. Cut and potted flowers were displayed all through the club house and were auctioned off by Dr. Martin Hoffman. The committee reported that \$135 had been cleared.

The regular monthly meeting was held on March 11. Due to the absence of our president, Mrs. Roger V. Walker, the first vice president, Mrs. Ledru O. Geib presided. Dr. Maude Watson, director of the Children's Fund of Michigan, was our guest speaker. Her subject was "What Has Mental Hygiene to Contribute to the Intelligent Handling of Children?"

IN MEMORIAM

Tea was served in the lounge with Mrs. Herman Scarney and Mrs. Wadsworth Warren as hostesses.

HELEN R. DOUB,
Press Chairman.

Monroe County

The Woman's Auxiliary met for a joint meeting with the Monroe County Medical Society on March 17. Following the dinner a lecture on "The Fads and Quackery in Cosmetics" was given by Dr. Warren Babcock of Grace Hospital, Detroit. The lecture was public and was followed by his showing a series of colored slides provided by the A.M.A.

(MRS. VINCENT) MARTHA BAKER,
Press Chairman.

Kent County

On February 9 at the regular monthly meeting of the Woman's Auxiliary, Dr. John Lavan, the Health Officer, gave a lecture on "Food Handling Facts." He explained the Food Ordinance, discussing the compulsory health examinations, the laws of sterilizing china and glassware in eating places, and the manner of assigning the red, blue and gold stars to restaurants.

Dr. Wm. J. Butler was the speaker at the meeting March 9. His subject was "Venereal Disease Problems." On March 29, the auxiliary coöperated with the Woman's Field Army of the American Society for the Control of Cancer in giving a benefit bridge to raise money so that a free lecture can be given to the people of this county. The women gave splendid coöperation to this project.

(MRS. ROBERT) MIRIAM ADAMS EATON,
Press Chairman.

Kalamazoo County

Mrs. John MacGregor entertained the Auxiliary in her beautiful new home at Parchment on March 15. Thirty-three members and two guests were present. The guests enjoyed being shown through the attractive rooms whose beauty had been added to by the presence of roses and spring flowers arranged in lovely bouquets.

After a bountiful coöperative dinner a short business meeting was held. Mrs. Lang announced that our society had been chosen to sponsor the local programs for National Cancer Week and Mrs. Jennings had been appointed to take charge of the activities.

The later evening was spent informally.

(MRS. HUGO) BARBARA AACH,
Publicity Chairman.

Jackson County

The regular meeting of the Women's Auxiliary was held Tuesday evening, March 15, at the home of Mrs. Frank Gibson, 2053 Wildwood Lane. A 6:30 dinner was served to the members present by a committee composed of Mesdames Corwin, Clark and John Wholihan, co-chairmen, John Van Schoick, C. D. Munro, M. N. Stewart and E. O. Leahy.

The president, Mrs. Ludwick, conducted a short business meeting, at which time it was reported that the money for our year's project has been more than raised. A petition was circulated and signed favoring a bill that April be declared National Cancer Control month.

A report from the nominating committee, composed of Mesdames Bullen, Clark and Hurley was read.

Mrs. Page, program chairman, then introduced the speaker of the evening, Miss Elizabeth Camburn. Her subject was "The Story of a Pioneer," the life of Dr. Anna Howard Shaw. Dr. Shaw, born in England, came to this country at a very early age,

and grew up to young womanhood in a log cabin in Michigan. During the World War, she was called to Washington, and from there organized the women of the United States to service, such as that of the Red Cross. She became one of the most distinguished women of this country. In her we had a reformer who was extraordinarily sane and tolerant. She was about five feet in height, had snow white hair, beautiful dark eyes, and looked most charming in her pulpit robes.

ANNA HYDE SHAEFFER,
Press Chairman.

IN MEMORIAM

Daniel Waldo Fenton, M.D.

Dr. Daniel Waldo Fenton of Reading, Michigan, died on January 7, 1938, of chronic myocarditis. Dr. Fenton was dean of the medical profession in Hillsdale County. He was born in Delaware County, Ohio, in 1848, and attended school in Galena, Ohio, and Fremont, Indiana. After studying medicine at the University of Michigan for two years, Dr. Fenton transferred to the Detroit College of Medicine, where he received his degree in 1876. He began practice in Angola, Indiana, the same year, and therefore had been practicing medicine for sixty-two years. In 1887, Dr. Fenton located at Reading, Michigan. Dr. Fenton served as Secretary-Treasurer of the Hillsdale County Medical Society for eighteen years. He was elected President Emeritus of the Hillsdale County Medical Society in 1937, and he was a member emeritus of the Michigan State Medical Society, 1937, and fellow of the American Medical Association. Dr. Fenton is survived by his daughter, Hazel Fenton Schermerhorn, his brother-in-law, John Thompson, and several cousins.

Dr. Lewis S. Potter

Dr. Lewis S. Potter died on April 19, at his home in Detroit following a brief illness. He was born at Maidstone, Ontario, forty-eight years ago, and lived in Detroit for thirty-one years. Dr. Potter was graduated from the Detroit College of Medicine, and for many years was a staff member of Providence Hospital. He is survived by his wife, Agnes, a daughter, Betty, and three sons, George, William and Theodore, also three brothers, Dr. Andrew, Dr. Willis and Fred Potter, and two sisters, Mrs. Fred Whitman and Mrs. William Hyland.

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SMALLPOX

Smallpox continues to spread in the state, occurring with considerable frequency in new localities. The total number of cases this year has been relatively small, although the incidence since January 1 is considerably more than for several years. Many of the cases have been so very mild and the lesions so few that either a physician has not been called or the disease has been overlooked. This has occurred in a number of communities so that cases have existed for several weeks and numerous exposures have occurred before the disease was discovered. Thus it has spread to many different localities, having occurred since January 1 in the following counties: Alger, Berrien, Branch, Calhoun, Dickinson, Genesee, Gogebic, Houghton, Iron, Kent, Marquette, Menominee, Monroe, Oakland, Ogemaw, Ontonagon, Ottawa, Washtenaw and Wayne.

TO SURVEY MICHIGAN'S HEALTH SERVICES

Michigan's state and local health organizations, both official and voluntary, will be surveyed by the State Health Studies Committee of the American Public Health Association under the direction of Dr. Carl E. Buck, field director.

The survey had been requested by Governor Frank Murphy and Dr. Don W. Gudakunst. Dr. Buck expects to begin his study in Michigan about June 1. He will be assisted by Dr. G. F. Amyot, adminis-

trative associate. Survey offices will be maintained in Lansing.

Scope of the survey will include an analysis of health services now being carried on by the State Department of Health, other state departments carrying on health activities, local health departments, educational institutions and voluntary health agencies. Gaps in Michigan's health program will be analyzed and recommendations made to meet these needs.

The survey will be made without cost to Michigan. The selection of Michigan as the next state to be studied was voted by the recent session of the A.P.H.A. committee in New York. Florida will be the next state to be surveyed following the Michigan study.

WEIL'S DISEASE

Outbreaks of epidemic jaundice appear to be more numerous during the last year than in previous times. It is true that we have had knowledge of such outbreaks during at least the last two generations. Little attention has been given to this disease by public health workers. Outbreaks of what appear to be a communicable form of jaundice have occurred during the last year in the following Michigan localities: Antrim, Berrien, Oakland, Ionia, Clinton, Jackson, Washtenaw and Monroe Counties, and the City of Detroit.

Little of the epidemiology has been worked out in connection with these outbreaks. The etiology has not been proved except in two or three instances. The specific cause of epidemic jaundice about which we know something is the same as that of Weil's disease, the causative organism of which is *leptospira icterohemorrhagiae*. While a number of investigators have been working on this disease and several articles have appeared in the literature, yet relatively

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The Chicago Tumor Institute offers consultation service to physicians in the diagnosis and treatment of cancer and radiation facilities for cancer patients.

The Institute also conducts research and offers training to physicians who may wish to qualify as specialists in the study and treatment of this disease.

Indigent patients amenable to radiation therapy will be accepted without charge.

little is known so far of the incidence of the disease, the method of spread, and the prevalence of the organism.

Rats are known to carry the infection. The organism is eliminated in the urine of both rats and humans. Dogs have been found to be affected and to play a part, although just what part is as yet somewhat uncertain.

Recently an outbreak occurred in Detroit in which there was one fatality. This outbreak is being investigated and will be reported by epidemiologists of the Detroit Department of Health.

During March a request was made by the Michigan Department of Health to the U. S. Public Health Service for the aid of a consultant to study the disease in Michigan. Dr. A. Packchianian was sent to Michigan for this purpose. He has collected laboratory samples in several outbreaks and has given some attention to the epidemiology. The studies are not yet completed. If they prove at all promising, it is likely that they will be carried on for some time. The epidemiology of the disease does not appear to be simple and will probably require much work before any definite conclusions can be drawn. Dr. Packchianian has already established the etiology of a few of the cases in the Detroit outbreak as being the leptospira icterohemorrhagiae.

One handicap in the investigations has been the difficulty in locating cases of what appear to be infectious jaundice during the acute stage when it is possible to obtain positive blood and urine cultures. Dr. Packchianian conservatively reserves judgment as to whether the outbreaks which have been occurring in Michigan are due entirely, or for the most part, to leptospira icterohemorrhagiae. Physicians are requested to report promptly to the local health officer any cases that appear to be epidemic jaundice.

CHILDREN'S DENTISTRY

Detailed instruction of practicing dentists in the importance and technic of children's dentistry will be carried on at selected centers throughout the state as a part of the Michigan maternal and child health program. Plans for the postgraduate instruction in children's dentistry are now being worked out under the direction of Dr. William R. Davis, director of the Bureau of Mouth Hygiene. He is being assisted by Dr. U. G. Rickert, president of the State Dental Society; Dr. Paul H. Jeserich, director of the postgraduate work of the University of Michigan School of Dentistry; and representatives of the W. K. Kellogg Foundation and the Children's Fund of Michigan.

Outstanding authorities in the field of children's dentistry are being secured to conduct the courses in cooperation with the local dental societies. The postgraduate courses will get under way early in the fall.

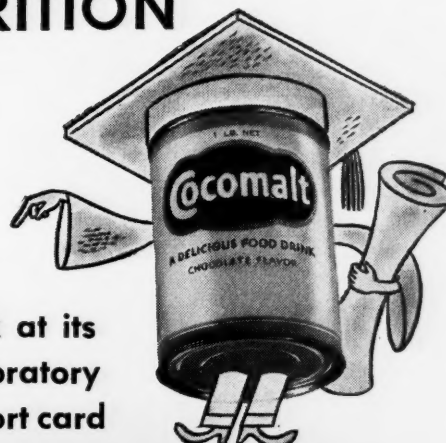
POSTGRADUATE COURSE IN PEDIATRICS

Physicians of northern Michigan will be offered a postgraduate course in pediatrics starting the week of May 2 as another phase of the Michigan maternal and child health program, it has been announced by Dr. Lillian R. Smith, director of the Bureau of Maternal and Child Health.

The course will be given at Grayling, Traverse City, Petoskey and Alpena on successive nights each week for four weeks. Dinner meetings will be held at each center to be followed by lectures and discussion. Physicians may attend the instruction center most conveniently located near them. There is no charge for the course.

The first series of lectures will be conducted by Dr. John L. Law, instructor in pediatrics and infectious diseases at the University of Michigan Hospi-

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tal. His subject will be "Management of meningitis, erysipelas, scarlet fever, and streptococcus infections in general with particular reference to the use and abuse of sulphanilamide."

Dr. W. C. C. Cole of Detroit Woman's Hospital will conduct the postgraduate lectures the week of May 9 on the subject of "Nontuberculous infections in the respiratory track as they occur in infancy and childhood."

The week of May 16 Dr. James Wilson of Detroit Children's Hospital will discuss "The newborn period: asphyxia (rôle of analgesic in production of), resuscitation, hemorrhage, atelectasis and other conditions of the newborn."

Dr. J. A. Johnston, pediatrician-in-chief at Detroit Henry Ford Hospital, will give the final series of lectures. His topic is "Nutritional studies in infancy and childhood; comparative study of various types of infant feeding; diet requirements in the older child and the adolescent; relation between infection and nutrition."

Seeking a Job

The editor of the *Malaya Tribune*, Selangor, F.M.S., received the following letter from a native who was applying for a position:

"Dear Sir, very honored and respected,

"I asking for job. I can do any kind of works by virtue of my flexible brain and very advanced training. I passed matriculation in a very large college in —.

"The flexible brain I have in my possession will bend towards any kind of works your honor yoking on me. I mathematics passing very good credit, making very good machine-like work; modern calculating machine simply eclipsed by my brain. English I passing with credit so I can be burdened with correspondence writing. . . .

"If your honor will be good enough to employ me, I will in duty bound always pray for your honor's long life. My prayers have always been heard as I always pray very loud. If wanting my services, I can come suddenly. Putting myself at your honor's large feet, I pray to become your honor's humble and faithful servant. I remain, Your Godsend servant."

—*Efficiency Magazine*.

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Age 25	This indicates 100 men representing an average group starting out in life.						
Age 35	5	10	10	40	35		
Age 45	16	1	3	65		15	
Age 55	20	1	3	46		30	
Age 65	36	1	4	5		54	
Age 75	63	1	2				34

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◆ General News and Announcements ◆

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2. Cass County Medical Society
3. Clinton County Medical Society
4. Delta County Medical Society
5. Dickinson-Iron County Medical Society
6. Eaton County Medical Society
7. Gogebic County Medical Society
8. Hillsdale County Medical Society
9. Houghton-Baraga-Keweenaw County Medical Society
10. Ingham County Medical Society
11. Jackson County Medical Society
12. Lapeer County Medical Society
13. Lenawee County Medical Society
14. Livingston County Medical Society
15. Luce County Medical Society
16. Manistee County Medical Society
17. Mecosta-Osceola County Medical Society
18. Menominee County Medical Society
19. Muskegon County Medical Society
20. Newaygo County Medical Society
21. O.M.C.O.R.O County Medical Society
22. Oceana County Medical Society
23. Ontonagon County Medical Society
24. Saginaw County Medical Society
25. Schoolcraft County Medical Society
26. Shiawassee County Medical Society
27. Tuscola County Medical Society.

These county medical societies have recorded 100 per cent paid membership for the year 1938. Is your county society listed above? Several societies have reported dues for all their members except one or two. If your dues are unpaid, please contact your county secretary today; you may be able to put your society in the 100 per cent classification.

"You cannot make the burden of civilization too great."—A.McL., Detroit.

* * *

The Lenawee County Medical Society heard Dr. Robert S. Breakey of Lansing on April 19. Doctor Breakey spoke on the subject of "Syphilis."

* * *

Dr. Ralph H. Pino of Detroit addressed the members of the Saginaw County Woman's Auxiliary on April 21 on the subject "Conservation of Eyesight."

* * *

"Depression is that period when we do without some of the things our parents never had."—J.M.R., Detroit.

* * *

Dr. Henry R. Carstens of Detroit, chairman of the Finance Committee of The Council, M.S.M.S., has been enjoying a vacation at Miami, Florida.

* * *

Modern definition of "technic": "Doing the simplest things with the greatest difficulty."—V.M.M., Grand Rapids.

* * *

Dr. Gordon Myers of Detroit spoke to the members of the Wexford County Medical Society at Cadillac on March 31. His subject was "Sulfanilamide."

* * *

Dr. Phillip Howard, Detroit, spoke on the subject "Convulsive Disorders of Infancy and Childhood" before the Lapeer County Medical Society on April 21, in Lapeer.

The Glee Club of the Wayne County Medical Society presented its Fifth Annual Concert in the Main Auditorium of the Detroit Institute of Arts on April 25.

* * *

Chiropractor pleads guilty.—J. J. Robbins, a chiropractor of Mason (Ingham County), Michigan, pled guilty on April 12 to a charge of practicing medicine without a license. Photostatic copies of a sign which read "Dr. J. J. Robbins" were produced in court.

* * *

Dr. Loren W. Shaffer, chairman of the Advisory Committee on Syphilis Control of the M.S.M.S., appeared on Wednesday, April 13, before the Oakland County Medical Society. His subject was "The Michigan Program of Syphilis Control."

* * *

You owe much of your medical security today to the past activities of organized medicine. You have an obligation to those who follow. Will you help carry on? Your destiny is intimately related to the success of your county, state and national medical organizations.

* * *

"State Society Night" will be celebrated by the St. Joseph and Branch County Medical Societies at Coldwater, on May 11. The O.M.C.O.R.O County Medical Society was host to the officers of the Michigan State Medical Society at a "State Society Night" program on April 27 in Gaylord.

* * *

Dr. Douglas Donald, Professor of Medicine, Wayne University, Detroit, addressed the St. Clair County Medical Society at its meeting of April 19 held at the Chateau in Port Huron. His subject was "Pain in the Cardiac Area Not Due to Coronary Disease."

* * *

The Gratiot-Isabella-Claire County Medical Society and the Dental Society held a joint meeting in Alma on April 21. Dr. Arthur C. Curtis of the Department of Internal Medicine, University of Michigan, was guest speaker. His subject was "Focal Infections."

* * *

Speed Trap: Physicians driving through Webberville, on U. S. 16 (between Detroit and Lansing), are warned to cut their speed to 20 miles per hour, as numerous complaints have been registered with the A.A.A. concerning the zealotness of Webberville's town marshal.

* * *

"Does your firm advertise in THE JOURNAL of the Michigan State Medical Society and does it exhibit at the annual conventions of the M.S.M.S.?" Ask this question of all detail men who call upon you seeking your patronage.

Patronize those who support you!

* * *

The State Compensation Officer of the Michigan Works Progress Administration at Lansing announces to the medical profession that treatment of hernia by the injection method is not authorized by the United States Employees' Compensation Commission, and will not be paid for by said commission.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. Stanley Leszynski of Detroit and *Dr. Francis J. O'Donnell* of Alpena have been appointed by the Governor to serve as new members of the Michigan State Board of Registration in Medicine. Drs. Eugene S. Thornton of Muskegon, Harold L. Morris of Detroit and John J. Walch of Escanaba have been reappointed as Board members.

* * *

Governor Frank Murphy has appointed four members to the State Board of Examiners in Basic Sciences. The Basic Science examinations will be in those subjects basic to all the healing professions. The appointees are all teachers who are not engaged in the actual practice of any of the healing arts. They consist at the present of Dr. W. O. Nelson of Wayne University, Dr. J. P. Haitams of Calvin College, Grand Rapids, the Rev. Father George Shiple of the University of Detroit, and Dr. Ralph C. Huston of Michigan State College. Another member of the Basic Science Board will be selected, according to a newspaper item, from nominations from the chiropractors. Departments in which the examinations will be held are physiology, anatomy, bacteriology, hygiene and public health, and chemistry.

* * *

Dr. Milton Shaw, Lansing, immediate past-president of the Ingham County Medical Society, was presented with a silver tray upon which was engraved the signature of every member of the Society. The award was given in appreciation of the service Doctor Shaw has rendered the medical profession and the community in the past.

* * *

The Detroit Tigers will be at home in Detroit prior to, during, and immediately after the 1938 annual meeting of the Michigan State Medical Society next September:

September 15, 16, 17—playing New York

September 18, 19—playing Washington

September 20, 21—playing Philadelphia

September 22, 23, 24, 25—playing Cleveland

* * *

Requests are being received almost daily by the Michigan State Medical Society Placement Bureau

from young physicians who desire to find suitable locations. Already three physicians have been assisted by the Bureau to find good locations to practice. Anyone who needs an assistant or who knows of a community where another physician is needed, is invited to communicate with the Placement Bureau, M.S.M.S., 2020 Olds Tower, Lansing.

* * *

San Francisco invites you.—On June 13, the American Medical Association's Annual Convention will convene in the Coast City. Physicians who plan to attend this great scientific exposition should secure hotel reservations at once. Write or wire Dr. F. C. Warnshuis, 450 Sutter Street, San Francisco. Give the names of members of your party, type of accommodations required, rates, dates of arrival and departure.

* * *

Members of the Michigan State Medical Society are cordially invited to join the Chicago Medical Society Special to the American Medical Association Convention in San Francisco. The special leaves Chicago on June 9, 1938, at 9:00 p. m. and arrives in San Francisco at 8:30 a. m., Sunday, June 12. For further information, address Dr. Victor L. Hitzfeld, chairman, Train Arrangements, Chicago Medical Society, 30 North Michigan Ave., Chicago, Ill.

* * *

Some untested drugs, like elixir of sulfanilamide, have proven deadly to patients and ruinous to a physician's reputation.

No unproven drugs are advertised in THE JOURNAL of the Michigan State Medical Society. Only pharmaceutical products accepted by the Councils of the American Medical Association are to be found in the pages of your State Society publication. This is for the protection of your patients and you. Patronize JOURNAL advertisers. Be safe.

* * *

The Upper Peninsula Medical Society will meet in Sault Ste. Marie on August 17 and 18, 1938. The Program Committee, of which Dr. F. C. Bandy of Sault Ste. Marie is chairman, is arranging a quality program for the two-day convention, which will

The Forty-ninth Annual Reunion

and

Detroit Clinics

of the Alumni Association of Wayne University

College of Medicine

will be held at Detroit, June 15 and 16, 1938

GENERAL NEWS AND ANNOUNCEMENTS

include a talk by Dr. W. W. Bauer of the American Medical Association, and also a symposium on "The Socio-Economic Problems of Medicine."

The complete program of the Upper Peninsula meeting will be published in succeeding issues of THE JOURNAL.

* * *

State Health Commissioner Don W. Gudakunst and Dr. C. C. Young, Director of the Laboratory, extend an invitation to all County Societies of the State to visit the Laboratory, located just outside of Lansing. Any Society wishing to accept this invitation may write Doctor Gudakunst and make all necessary arrangements. A visit to the Laboratory is very worthwhile; the amount and type of work done by the State Health Laboratory is not realized until one visits the plant.

* * *

The Wayne County Medical Society has publicized in the daily newspapers in Detroit the fact that medical care is available for every resident of Wayne County regardless of his economic circumstances. Each member of the medical profession has been supplied with an elaborate diagram supplying correlated information showing how each person may receive medical care that he or she needs. If the patient is unable to pay anything, it is supplied. If he can meet the cost in deferred payments, he is shown how this may be done.

* * *

Mr. George T. Gundry, Auditor General of Michigan, has written the following relative to the Michigan State Medical Society's Filter System, created to help control intake under the Afflicted-Crippled Child Acts:

"The Medical Filter Committee is doing a difficult job with splendid results on a strictly gratuitous basis. Therefore, this office is desirous at all times of co-

operating in every way with the Medical Filter Committee in its various duties, and we will never advocate any procedure which circumvents the work of that committee."

* * *

Crippled and Afflicted Child Commitments for the month of March, 1938, were as follows: Crippled Child: Total of 354 of which 155 went to University Hospital; and 199 went to miscellaneous hospitals. Of the above, Wayne County wrote 110 orders of which 31 went to University Hospital and 79 went to miscellaneous hospitals.

Afflicted Child: Total of 2,200 of which 295 went to University Hospital; and 1,905 went to miscellaneous hospitals. Of the above, Wayne County wrote 632 of the orders, of which 37 went to University Hospital and 595 went to miscellaneous hospitals.

* * *

Two "refresher courses" have been arranged by the Michigan Crippled Children Commission for physicians in the neighborhood of Bay City and Ironwood.

Dr. John Law of Ann Arbor and Dr. A. D. LaFerte of Detroit conducted the course in Bay City on May 11. Dr. Law's subject was "Pediatric Problems," and Dr. LaFerte spoke on "Fractures of the Neck of the Femur."

On May 23, a "refresher" will be given in Wakefield, Gogebic County, for all physicians of the upper Peninsula. Dr. E. R. Elzinga of Marquette will speak on "Fractures of the Hip," and Dr. M. Cooperstock will present "Treatment in Pediatrics."

* * *

Dr. Harold A. Miller of Lansing spoke before the Community Lecture Committee, Eaton Rapids High School, on the subject of "Adolescence" on March 10. On March 21, he addressed the Parent-Teacher

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GENERAL NEWS AND ANNOUNCEMENTS

Association of Lapeer on the subject of "Problems of Sex Education in High Schools."

"Social Disease with Its Implications" was the subject of his lecture on the Parent Institution Program held in Reading on March 30. The Thumb Association of Child Study Club, Sandusky, scheduled Doctor Miller on May 18 to speak on "Sex Education in High Schools." Doctor Miller's lectures are given under the auspices and sponsored by the Joint Committee on Health Education.

* * *

Dr. C. D. Munro of Jackson was honored recently by members of the Jackson County Medical Society when the Society presented to the Board of Managers of Foote Memorial Hospital, Jackson, a bronze plaque on which is embossed the profile and a testimonial to Dr. Munro. Dr. John D. Van Schoick, President of the Jackson County Medical Society, presented the plaque to Chairman H. D. Burton of the Hospital Board. Dr. Munro is a past president of the Jackson County Medical Society and former chairman of the surgery section of the Michigan State Medical Society. Dr. Munro has a son, Nathan, who is a sophomore in the medical school at the University of Michigan.

* * *

Your friends—The following firms are some more of your friends who entered technical exhibits at the 1937 Grand Rapids Convention. Products of these firms are Council approved and are worthy of your consideration:

Randolph Surgical Supply Company, Detroit, Mich.
E. J. Rose Manufacturing Company, Detroit, Mich.
W. B. Saunders Company, Philadelphia, Pa.
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Standard X-Ray Equipment Company, Detroit, Mich.
Van Hoosen Farm, Rochester, Mich.
Wall Chemicals, Inc., Detroit, Mich.
Western Electric Hearing Aids, Detroit, Mich.
The Ziemmer Company, Pittsburgh, Pa.
The Zimmer Manufacturing Company, Warsaw, Indiana.

* * *

The Wayne County Medical Society received many lines of favorable publicity in Detroit newspapers as a result of its statement to the public "If you need medical care, see your physician. He will see that you get it."

One newspaper carried the following announcement, prominently displayed:

IF YOU NEED MEDICAL CARE
AND DO NOT KNOW HOW TO GET IT
WRITE AT ONCE TO
WAYNE COUNTY MEDICAL SOCIETY
4421 WOODWARD AVENUE
DETROIT

This activity represented the first step in the Wayne County Medical Society's study of medical needs, in conformity with the A.M.A. Survey.

* * *

The Third Anniversary Meeting of District Department of Health No. 6 (Luce and Mackinac Counties) was held on April 1 in Newberry. Over 300 attended the afternoon public meeting. More than 100 teachers and nurses attended the round table discussion in the morning. All the members of the staffs of the nine health units in the Upper Peninsula were present. Among the speakers were Dr. Don W. Gudakunst, State Health Commissioner, Dr. Loren W. Shaffer, Detroit, chairman of the M.S.M.S Advisory Committee on Syphilis Control, and Dr. Clare Gates, field secretary of the Joint Committee on Health Education. Dr. F. C. Bandy of Sault Ste. Marie, Councilor of the State Medical Society, acted as chairman of the afternoon program.

MAY, 1938.



DIET

When the impulse to defecate is lessened due to improper diet or lack of discipline, the fecal matter usually becomes dehydrated and impacted in the bowel . . . To simplify the problem of bowel regularity, Petrolagar may be prescribed to advantage, as it assists in the regulation of bowel movement. Petrolagar mixes intimately with the bulk of the stool to induce a soft, easily passed mass. By reason of its pleasant taste and mild but thorough action, Petrolagar is agreeable to patients of all ages. Five types of Petrolagar provide a choice of laxative medication suitable for the individual patient. Petrolagar Laboratories, Inc., 8134 McCormick Blvd., Chicago, Ill.

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GYNECOLOGY—Personal Courses May 2nd, June 13th, August 22nd. Gynecological Pathology by Dr. Schiller starting July 25th.

OBSTETRICS—Two Weeks Intensive Course starting June 6th; Informal Course starting every week.

FRACTURES & TRAUMATIC SURGERY—Informal Course; Intensive Formal Course starting June 6th.

UROLOGY—One Month Course; Two Weeks Course starting every two weeks.

CYSTOSCOPY—Ten Day Practical Course Rotary every two weeks.

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DISEASES

PALMER HOUSE, Chicago, June 6-7-8-9, 1938

A well rounded program of lectures, demonstrations and round table discussions is planned. Everything humanly possible will be done to make your visit one of profit, pleasure and comfort. Mark the dates on your calendar and plan to attend.

For further information write to

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Chicago, Illinois

Official Call to the Officers, Fellows, and Members of the American Medical Association: The eighty-ninth annual session of the American Medical Association will be held in San Francisco, California, from Monday, June 13, to Friday, June 17, 1938.

The House of Delegates will convene on Monday, June 13.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June 14, at 8:30 p. m.

The various sections of the Scientific Assembly will meet Wednesday, June 15, at 9 a. m. and at 2 p. m. and subsequently according to their respective programs.

J. H. J. UPHAM, M.D., President

NATHAN B. VAN ETEN, M.D.

Speaker, House of Delegates

OLIN WEST, M.D., Secretary.

* * *

The Medical Society of the State of New York has developed a "Hand Book Series," as a part of its Speaker's Bureau activity. The series includes monthly bulletins covering particular subjects for dissemination to the public by physicians who have indicated their willingness to address lay audiences in behalf of health education.

Dr. Charles H. Goodrich, president of the Society, states: "It is required of us in all loyalty to our people and to each other to increase our platform appearances and to provide for systematic covering of the many truths which the people should know and concerning which they are being deceived by gilded sophistries and false promises."

* * *

Healers refused the title of "Doctor" in Ontario.—A bill which sought the title of "doctor" for osteopaths, chiropractors and recognized drugless practitioners was thrown out by the Private Bills Committee of the Ontario Legislature, on March 29. According to the *Toronto Daily Star*, "provincial police had to be called to make a path for Dr. Herbert Bruce through the hallway outside the committee room, which was jammed by supporters of the drugless practitioners. They jostled the former lieutenant-governor and called insulting remarks at him."

"It was immediately after Dr. Bruce's plea against the bill that the committee overwhelmingly disposed of it."

* * *

THE JOURNAL of the Michigan State Medical Society has played no small part in the progress of Michigan medicine to its present estimable position. Today THE JOURNAL with its excellent presentation of original research, special articles, committee reports and county society activities ranks with the outstanding state society publications. As a promoter of society unity, THE JOURNAL serves to weld together Michigan medicine in an integrated program for conserving the health of the citizens of this state. Dr. J. H. Dempster and the publication committee of the society are to be congratulated on the fine service they are rendering their profession and, consequently, all the people of Michigan.—*Michigan Public Health*, February, 1938.

* * *

The employed person in the United States wants a job and the health to keep on the job. He does not want to lose any time due to sickness. He knows that in Germany, under a health insurance system, time lost through sickness by insured workmen trebled in fifty years. In England the time lost increased from nine days, before compulsory insurance went into effect, to twelve and one-half days per man yearly after the system was in operation.

JOUR. M.S.M.S.

GENERAL NEWS AND ANNOUNCEMENTS

The comparison with American figures is striking, for the average loss of time by our own workmen is only about six and one-half days a year, and the figures have been stationary at that level for twenty-five years, and under a system of private medical practice!

* * *

The Medical School Seminar at the 41st Annual Meeting of the Associated Harvard Clubs, will be held at the Palmer House, Chicago, Saturday, May 21, at 2:30 p. m. immediately following a joint luncheon of all the schools. Those on the program of the Medical Seminar include Dr. C. Sidney Burwell, Dean and Research Professor of Clinical Medicine, Harvard; Dr. A. Baird Hastings, Hamilton Kuhn Professor of Biological Chemistry; Dr. Walter Bauer, Associate Professor and Tutor in Medicine; and Dr. Elliott C. Cutler, Moseley Professor of Surgery.

All graduates of the University are invited to attend. Admission cards are available to non-Harvard men; address Dr. Willard O. Thompson, 700 North Michigan Avenue, Chicago, Ill.

* * *

The Michigan Department of Health, the University of Michigan Department of Postgraduate Medicine, the Michigan State Medical Society and the Michigan Branch of the American Academy of Pediatrics are sponsors of the second series of postgraduate lectures in pediatrics in four centers, Alpena, Petoskey, Traverse City, and Grayling, once a week for four weeks, now in session.

The weekly schedule of lectures is as follows: Monday, Grayling, Mercy Hospital, 6:00 p. m.; Tuesday, Alpena, Owl Cafe, 6:00 p. m.; Wednesday, Petoskey, Hotel Perry, 6:00 p. m.; Thursday, Traverse City, Central Michigan Children's Clinic, 4:00 p. m.

The program: *Week of May 2*—Dr. John Law, Ann Arbor. Management of meningitis, erysipelas, scarlet fever, and streptococcus infections in general with particular reference to the use and abuse of sulfanilamide. *Week of May 9*—Dr. W. C. C. Cole, Detroit. Non-tuberculous infections in the respiratory tract as they occur in infancy and childhood. *Week of May 16*—Dr. James Wilson, Detroit. The newborn period; asphyxia (role of analgesic in production of), resuscitation, hemorrhage, atelectasis and other conditions of the newborn. *Week of May 23*—Dr. J. A. Johnston, Detroit. Nutritional studies in infancy and childhood; comparative study of various types of infant feeding, diet requirements in the older child and the adolescent; relation between infection and nutrition.

* * *

American Express Tour to A.M.A.

Physicians and their families are evincing a very keen interest in arrangements made by the American Express Travel Service to see America en route to and returning from the San Francisco Convention of the A.M.A.

The beauty and relaxation of such scenes as the Indian Detour in New Mexico, the Grand Canyon of Arizona, Los Angeles and the beauties of southern California, Santa Catalina Island, the famous Columbia River Highway in Oregon, Seattle, Washington, Victoria, Vancouver, Lake Louise and Banff in the Canadian Rockies, Yellowstone National Park, Colorado Springs and many others, will be enjoyed.

An attractive folder, describing these travel arrangements and giving the all-inclusive price, may be obtained from American Express Travel Service, 1227 Washington Blvd., Detroit, Michigan.

MAY, 1938



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* * *

Organizational talks by officers and by the Executive Secretary of the Michigan State Medical Society during the past month include:

Federal Health Program.—"Though details won't be announced for some time, New Deal leaders have drafted plans for a large-scale national health program to be financed by the Federal Government. The first move calls for a national health conference—probably in early fall."—*The Periscope in News Week*, March 14, 1938.

Speaker	City	Date	Organization	Subject
Dr. P. R. Urmston	Battle Creek	3/22	Calhoun County Med. Soc.	"A.M.A. Survey"
Dr. L. F. Foster	Battle Creek	3/22	Calhoun County Med. Soc.	"A.M.A. Survey"
Dr. L. G. Christian	Battle Creek	3/22	Calhoun County Med. Soc.	Michigan Health League
Wm. J. Burns	Battle Creek	3/22	Calhoun County Med. Soc.	"What the M.S.M.S. is Doing"
Dr. L. F. Foster	Port Huron	4/5	St. Clair County Med. Soc.	"A.M.A. Survey"
Dr. P. R. Urmston	Port Huron	4/5	St. Clair County Med. Soc.	"The Council's Work"
Wm. J. Burns	Port Huron	4/5	St. Clair County Med. Soc.	"Recent Legislative Developments"
Dr. L. F. Foster	Lansing	4/19	Ingham County Med. Soc.	"A.M.A. Survey"
Wm. J. Burns	Lansing	4/19	Ingham County Med. Soc.	"What's Going On"
Dr. L. F. Foster	Uby	4/21	Huron-Sanilac Med. Soc.	"A.M.A. Survey"
Wm. J. Burns	Battle Creek	4/26	Battle Creek Academy of Medicine and Dentistry with Calhoun County Bar Ass'n	"Results from Cooperation"
Dr. Henry Cook	Gaylord	4/27	OMCORO County Med. Soc.	"Preventive Medicine"
Dr. P. R. Urmston	Gaylord	4/27	OMCORO County Med. Soc.	"Work of the Council"
Dr. L. F. Foster	Gaylord	4/27	OMCORO County Med. Soc.	"A.M.A. Survey"
Wm. J. Burns	Gaylord	4/27	OMCORO County Med. Soc.	"Other Activities"
Dr. Henry Cook	Kalamazoo	(noon) 5/11	Kalamazoo Academy of Medicine (Board of Trustees)	"A.M.A. Survey"
Dr. L. F. Foster	Kalamazoo	(noon) 5/11	Kalamazoo Academy of Medicine (Board of Trustees)	"A.M.A. Survey"
Dr. P. R. Urmston	Coldwater	(night) 5/11	St. Joseph-Branch County Med. Societies	"State Society Night"
Dr. F. T. Andrews	Coldwater	(night) 5/11	St. Joseph-Branch County Med. Societies	"State Society Night"
Wm. J. Burns	Coldwater	(night) 5/11	St. Joseph-Branch County Med. Societies	"State Society Night"
Wm. J. Burns	Battle Creek	5/12	Mich. State Nurses Ass'n	"Panel Discussion"
Dr. L. F. Foster	Marquette	5/14-15	{Upper Peninsula County Society Secretaries' Conference	"A.M.A. Survey"
Wm. J. Burns	Marquette	5/14-15	{Society Secretaries' Conference	"Other Activities"
Dr. L. F. Foster	Monroe	5/19	Monroe County Med. Society	"Ethics"
Wm. J. Burns	Monroe	5/19	Monroe County Med. Society	"A.M.A. Survey"

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* * *

Dr. A. W. Lescohier, who has been for a number of years manager of Parke Davis and Company, has been promoted to the position of president. THE JOURNAL extends congratulations to Dr. Lescohier in this recognition of his ability. A member of the medical profession, the doctor has kept close to the profession. He is an old member of the Wayne County Medical Society and Michigan State Medical Society. Dr. Lescohier was associated with the Research Department of Parke Davis before he was an M.D. He relinquished his position from 1905 to 1909 to attend what is now the Medical School of Wayne University. His course in medical college was brilliant. Following his graduation, in 1909, he returned to Parke Davis where he has remained. His career has been so satisfactory to

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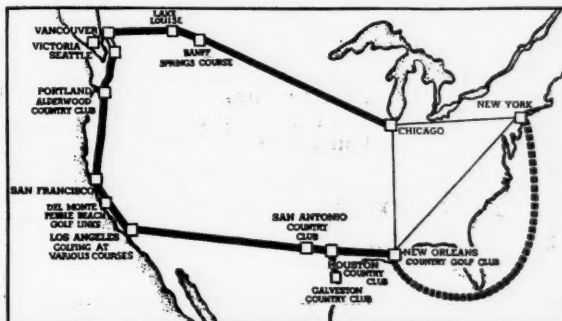
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all concerned that he now holds the highest position in the company. Dr. Lescohier has made many friends among the medical profession not only within Michigan but wherever in his wide business relations he is known.

* * *

All around or part way.—Flexibility marks the "Golfer's Special" itinerary to San Francisco for the 24th Annual Tournament of the American Medical Golfing Association, June 13, 1938. You may join the Tour at three points: (1) at New York, sailing on the luxurious S. S. Dixie to New Orleans, (2) at New Orleans, via rail to Houston, Galveston, San Antonio, Los Angeles, Del Monte, and San Francisco, (3) at San Francisco, for the return journey via rail through the glorious Northwest—Portland, Seattle, (all-day boat trip up Puget Sound), Victoria, Lake Louise and Banff. Non-golfers as well as golfers (and their ladies) are invited to take advantage of this wonderful trip. Write for complete details: Bill Burns, 731 N. Capital Ave., Lansing.



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* * *

Taxes payable by individual physicians.—Under the Social Security Act an employer is liable for certain taxes. There are only a few exceptions to the rule. A physician is in the same position as any one else. If he employs one or more persons not in the excepted class, he must apply for a registration number to the Social Security unit or the tax unit of the Commissioner of Internal Revenue office and get a number for himself as an employer. His employee must do likewise. The physician must make his regular monthly, quarterly and annual returns, paying his own taxes and the tax that he deducts from his employee's salary.

If a physician is an employee, he likewise is liable for taxes under the Social Security Act, and he must like wise apply for and be given a number. A physician who employs only one employee not in the excepted class—a domestic servant for instance, is excepted—is liable for the tax. If he employs a nurse, he is liable. If he employs a secretary, he is liable. If he employs as many as eight persons, or if a hospital or other organization not exempt employs as many as eight persons, that physician or organization is liable for additional taxes. The simplest way is to determine one's status as an employer or as an employee and set one's course right so that one will not be called on later to pay taxes and accrued penalties.—Wm. C. Woodward, M.D., L.L.M., Chicago.

* * *

Death in Florida.—In 1935, Dr. Hendry Connell of Kingston, Ont., announced the discovery of "Ensol" for use in treating cancer. The press hailed it as a new "cancer cure," but the American Medical Association condemned the fluid as unscientifically compounded. Dr. Morris Fishbein, A.M.A. spokesman, editorialized: "Public officials, university officials, and some Canadian physicians have been led into participation in the promotion of a project which will inevitably bring them grief."

At Orlando, Fla., last week grief came not to officials but to ten cancer patients—two men, eight women—who died from a lockjaw-like disease. Four others lay seriously ill in local hospitals. All had been given injections of "Rex" (name of a drug made under the Ensol formula by the Biochemical Research Foundation, Philadelphia).

Last fall, when Elixir of Sulfanilamide killed ninety-three persons throughout the country, government agents had to trace more than 1,000 shipments to warn doctors of danger (*News Week*, Nov. 1, 1937). In tracking down Ensol shipments, the Federal Food and Drug Administration found that only six physicians in New York, Ohio, Kansas, Michigan, and Wisconsin possessed the drug—and they had just fifty-four vials of Ensol among them. It took but a few hours to telephone them to hold their supplies for future examination.

In Kingston, Dr. Connell defended himself: "I

JOUR. M.S.M.S.

GENERAL NEWS AND ANNOUNCEMENTS

am convinced one bottle of Ensol became contaminated." But health officials took two vials at random from the supply of Dr. T. A. Neal—who had administered the drug to Orlando victims—and injected the contents into guinea pigs. Since some of the animals died of lockjaw, it is believed Dr. Neal's entire stock was contaminated.—*News Week*, April 11, 1938.

* * *

School Health Educational Institute

The Division of Hygiene and Public Health and the Extension Service of the University of Michigan in coöperation with the Michigan School Health Association announce a School Health Education Institute, May 27 and 28, 1938, at the Michigan Union, University of Michigan, Ann Arbor.

PROGRAM

Friday, May 27

Morning

Bernard W. Carey, M.D., President of the Michigan School Health Association, presiding

REGISTRATION.

INTRODUCTORY REMARKS. Bernard W. Carey, M.D.

TRENDS IN SCHOOL HEALTH EDUCATION. John Sundwall, M.D., President of the American School Health Association, and Director of the Division of Hygiene and Public Health, University of Michigan.

INTERMISSION. (Discussion.)

SOME DEBATABLE ISSUES IN HEALTH EDUCATION. J. B. Edmonson, Ph.D., Dean, School of Education, University of Michigan.

INTERMISSION. (Discussion.)

SEEKERS OF HEALTH. Thurman B. Rice, M.D., Chief, Bureau of Health and Physical Education, Indiana Division of Public Health.

LUNCHEON, 60c.

BUSINESS MEETING, Michigan School Health Association.

Afternoon

J. D. Brook, M.D., Member of Board of Directors, Michigan School Health Association, presiding.

THE MEDICAL PROFESSION AND THE PUBLIC SCHOOLS. Henry Cook, M.D., President, Michigan State Medical Society.

INTERMISSION. (Discussion.)

THE STATE DEPARTMENT OF PUBLIC INSTRUCTION AND HEALTH EDUCATION. Hon. Eugene B. Elliot, Superintendent of Public Instruction.

INTERMISSION. (Discussion.)

THE STATE DEPARTMENT OF HEALTH AND HEALTH EDUCATION. Don W. Gudakunst, M.D., State Health Commissioner.

INTERMISSION. (Discussion.)

COLLEGE HEALTH PROGRAMS IN MICHIGAN. THEIR PRESENT STATUS. Glenadine Snow, M.D., Director, Student Health Service, Ypsilanti State Normal College.

INTERMISSION. (Discussion.)

DINNER, 75c (Michigan Union). Kenneth L. Heaton, Ph.D., Director, Bureau of Curriculum Research, Lansing, Toastmaster.

THE MICHIGAN SCHOOL HEALTH ASSOCIATION. WHAT IT STANDS FOR. Bernard W. Carey, M.D., President, Michigan School Health Association.

THE AMERICAN SCHOOL HEALTH ASSOCIATION. John Sundwall, M.D., President, American School Health Association.

THE UNIVERSITY AND SCHOOL HEALTH EDUCATION. James D. Bruce, M.D., Director, Division of Health Sciences, University of Michigan.

MEETING OF CITY AND COUNTY HEALTH OFFICERS. Sue H. Thompson, M.D., Director, Health District No. 2, West Branch, Michigan, Presiding.

ADDRESS: Don W. Gudakunst, M.D., State Health Commissioner.

Saturday, May 28

Morning

V. K. Volk, M.D., Secretary, The Michigan School Health Association, presiding.

THE PHYSIOLOGICAL BASIS OF HEALTH. John W. Bean, M.D., Assistant Professor of Physiology, University of Michigan.

INTERMISSION. (Discussion.)

HEALTH MISCONCEPTIONS. Warren E. Forsythe, M.D., Director, University Health Service, University of Michigan.

INTERMISSION. (Discussion.)

COORDINATION OF HEALTH AND PHYSICAL EDUCATION. Thurman B. Rice, M.D., Chief, Bureau of Health and Physical Education, Indiana Division of Public Health.

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Afternoon

Louise Knapp, R.N., Professor of Public Health Nursing,
Wayne University, Detroit, presiding.

THE NURSE'S CONTRIBUTION TO SCHOOL HEALTH EDUCATION.
Grace Ross, R.N., Supervisor of Nursing, Detroit Department of Health.

INTERMISSION. (Discussion.)

THE PROBLEM SOLVING APPROACH TO SCHOOL HEALTH PROBLEMS. Mabel E. Rugen, Ph.D., Associate-Professor of Physical Education, University of Michigan.

INTERMISSION. (Discussion.)

A SIX-POINT PROGRAM FOR THE IMPROVEMENT OF DENTAL HEALTH. (Illustration.) Kenneth A. Easlick, D.D.S., Assistant-Professor, School of Dentistry, University of Michigan.

INTERMISSION. (Discussion.)

CHILD GUIDANCE IN THE PUBLIC SCHOOLS. Paul H. Jordan, M.D., Psychiatrist, Michigan Child Guidance Institute, Ann Arbor.

DISCUSSION.

* * *

EXHIBITORS AT 1938 MICHIGAN STATE MEDICAL SOCIETY CONVENTION

Book-Cadillac Hotel, Detroit, September 20, 21,
22, 1938:

Name of Company	City	Booth No.
Akron Truss Company.....	Detroit, Mich.	75
A. S. Aloe Company.....	St. Louis, Mo.	4
Arlington Chemical Company.....	Yonkers, N. Y.	15
Bard-Parker Company, Inc.....	Danbury, Conn.	7
Bilhuber-Knoll Corporation.....	Jersey City, N. J.	38
Burroughs Wellcome & Co., Inc.	New York, N. Y.	12
S. H. Camp Company.....	Jackson, Mich.	22
Coca-Cola Company	Atlanta, Ga.	70
Cottrell-Clarke, Inc.	Detroit, Mich.	64
R. B. Davis Sales Corp.....	Hoboken, N. J.	66
Detroit X-ray Sales Co.....	Detroit, Mich.	59
Dictaphone Sales Corp.....	Detroit, Mich.	71
Duke Laboratories, Inc.....	Long Island City, N. Y.	52
General Electric X-ray Corp.....	Chicago, Ill.	53
Gerber Products Company.....	Fremont, Mich.	45
Gordon Shoe Co.....	Detroit, Mich.	72
Hack Shoe Company.....	Detroit, Mich.	3
Hanovia Chemical & Mfg. Co.....	Newark, N. J.	5, 6
J. F. Hartz Company.....	Detroit, Mich.	54
H. J. Heinz Company.....	Pittsburgh, Pa.	43
Holland-Rantos, Inc.....	New York, N. Y.	36
Horlick's Malted Milk Corp.....	Racine, Wis.	28
G. A. Ingram & Company.....	Detroit, Mich.	62, 63
Jones Metabolism Equipment Co.	Chicago, Ill.	8
The Jones Surgical Supply Co.....	Cleveland, Ohio	56
A. Kuhlman & Company.....	Detroit, Mich.	69
Lea & Febiger Company.....	Philadelphia, Pa.	55
Lederle Laboratories	New York, N. Y.	25
Libby, McNeill & Libby.....	Chicago, Ill.	68
Liebel-Flarsheim Company	Cincinnati, Ohio	50
J. B. Lippincott Company.....	Philadelphia, Pa.	9
M. & R. Dietetic Labs.....	Columbus, Ohio	47
Mead Johnson & Company.....	Evansville, Ind.	29, 30
Medical Arts Pharmacy.....	Grand Rapids, Mich.	26, 27
Medical Case History Bureau.....	New York, N. Y.	40
Medical Protective Company.....	Wheaton, Ill.	39
The Mennen Company.....	Newark, N. J.	48
Merck & Company.....	Rahway, N. J.	10, 11
The Wm. S. Merrell Company.....	Cincinnati, Ohio	46
C. V. Mosby Company.....	St. Louis, Mo.	2
Nestle's Milk Products Co.....	New York, N. Y.	16
Parke, Davis & Company.....	Detroit, Mich.	17, 18, 19, 20
Pelton & Crane Company.....	Detroit, Mich.	57, 58
Pet Milk Sales Corp.....	St. Louis, Mo.	41, 42
Petrolagar Laboratories, Inc.....	Chicago, Ill.	67
Philip Morris Company, Ltd.....	New York, N. Y.	21
Physicians Equip. Exchange.....	Detroit, Mich.	73
Picker X-ray Corporation.....	Chicago, Ill.	23
Pocahontas Fuel Company.....	Detroit, Mich.	74
Professional Management	Battle Creek, Mich.	65
Randolph Surgical Supply Co.....	Detroit, Mich.	13, 14
Sandoz Chemical Works, Inc.....	New York, N. Y.	24
W. B. Saunders Company.....	Philadelphia, Pa.	49
Smith, Kline & French Labs.....	Philadelphia, Pa.	34, 35
E. R. Squibb & Sons.....	New York, N. Y.	44
Frederick Stearns & Co.....	Detroit, Mich.	60, 61
Taylor Instrument Companies.....	Rochester, N. Y.	32, 33
Van Hoosen Farm.....	Rochester, Mich.	37
Vernor's Gingerale	Detroit, Mich.	1
Wall Chemicals Company.....	Detroit, Mich.	31
The Zemmer Company.....	Pittsburgh, Pa.	51
Zimmer Manufacturing Co.....	Warsaw, Ind.	76

Your patronage of these friends who are supporting the Michigan State Medical Society is earnestly recommended.

JOUR. M.S.M.S.

CREDIT IS DUE

The following members of the Michigan State Medical Society were present at the postgraduate assemblies of the M.S.M.S. Annual Meeting in Grand Rapids, September, 1937. This list represents the registration of Thursday, September 30 (the final day of the convention):

- Drs. U. M. Adams, Marcellus; J. H. Ahronheim, Jackson; Herman Albrecht, Detroit; R. W. Albi, Lake City; Norman M. Allen, Detroit; H. R. Allen, Battle Creek.
Drs. Helen S. Barnard, Muskegon; W. H. Barnum, Fremont; Perry C. Beck, Bronson; Frederick M. Boothby, Lawrence; Earl W. Brubaker, Lansing; G. R. Bullen, Jackson.
Drs. Carl D. Camp, Ann Arbor; James B. Campbell, Big Rapids; Clinton C. Collier, Whitehall; W. B. Cooksey, Detroit.
Drs. Russell N. DeJong, Ann Arbor; H. J. Damstra, Wayland; A. R. Dickson, Battle Creek.
Dr. Clarence H. Eisman, Detroit.
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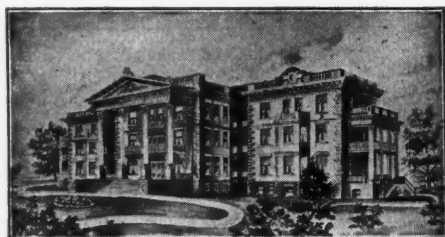
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A TEXT-BOOK OF PATHOLOGY, Edited by E. T. Bell, M.D., Professor of Pathology, University of Minnesota, Minneapolis, Minnesota. Contributors: E. T. Bell, M.D., Professor of Pathology, B. I. Clawson, Professor of Pathology, Hal Downey, Ph.D., Professor of Hematology, J. S. McCartney, M.D., Associate Professor of Pathology, and C. J. Watson, M.D., Associate Professor of Medicine, University of Minnesota, Minneapolis, Minn. Third edition, enlarged and thoroughly revised, published 1938. Octavo, 894 pages, illustrated with 412 engravings and 2 colored plates. Cloth, \$9.50, net. Washington Square, Philadelphia: Lea & Febiger.

The third revision of this work has made it possible to bring it abreast with current medical thought on the subject. The book has been increased in size by over one hundred pages and sixty-two new illustrations have been added. The plan of the work is such that the student is able to approach clinical medicine as a direct continuation of his work in pathology. In other words, clinical medicine will not be found a new and different field. The arrangement of the work is such that it resembles a text on the practice of medicine, except that the emphasis is on pathology rather than etiology and symptomatology. It will make a splendid companion book to any work on practice.

THE PRINCIPLES OF ROENTGENOLOGICAL INTERPRETATION. By L. R. Sante, M.D., Professor of Radiology, St. Louis University School of Medicine, Radiologist to St. Louis City Hospital and St. Mary's Hospital, St. Louis. 340 pages, illustrated. Price \$5.50. Ann Arbor: Edwards Brothers, Inc., 1938.

This is a very teachable work. Instead of reproductions of roentgenograms, which are sometimes confusing to students and beginners, the illustrations are largely line drawings from x-ray films. This has enabled the author to emphasize the pathology under discussion and to bring it into relief. Though a splendid way of enlightening the student or the physician striving to obtain an intelligent conception of the subject, the radiograph should also be studied. It cannot be dispensed with. The whole range of roentgenography is presented. One hundred and eleven pages are devoted to fractures and bone disease. The various systems of the body are adequately discussed from the roentgenographic viewpoint. A commendable feature is the list of questions appended to each chapter for self-examination. The author is recognized by roentgenologists everywhere as one of the most competent to write such a text-book. A unique feature is the format in which the work appears. The pages are large, 8 by 11 inches in size, with double columns printed in typewritten style and photolithographed. Unusual as this method of bookmaking is, the effect on the whole is pleasing as it makes for easy reading.

BOOK OF TYPEFACES AND EDITORIAL HELPS. Limited edition. Copies on request. The Bruce Publishing Company, St. Paul, Minnesota.

This work discusses the subject of type in all its phases. It should interest all readers as well as editors. The selection of type is an art in itself. The printed page increases in interest the more we know about its mechanics. The point system is described at length, as well as the great variety of letters, by illustration. The question, what is a half-tone, is clearly explained. For the authors of papers, all the commonly used proofreader's correction marks are given.

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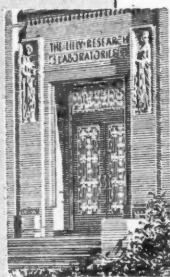
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